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PREMIÈRE PARTIE
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I

Nous étions à l'Étude, quand le Proviseur entra, suivi d'un nouveau habillé en bourgeois et d'un garçon de classe qui portait un grand pupitre. Ceux qui dormaient se réveillèrent, et chacun se leva comme surpris dans son travail.

Le Proviseur nous fit signe de nous rasseoir; puis, se tournant vers le maître d'études:

-- Monsieur Roger, lui dit-il à demi-voix, voici un élève que je vous recommande, il entre en cinquième. Si son travail et sa conduite sont méritoires, il passera dans les grands, où l'appelle son âge.

Resté dans l'angle, derrière la porte, si bien qu'on l'apercevait à peine, le nouveau était un gars de la campagne, d'une quinzaine d'années environ, et plus haut de taille qu'aucun de nous tous. Il avait les cheveux coupés droit sur le front, comme un chantre de village, l'air raisonnable et fort embarrassé. Quoiqu'il ne fût pas large des épaules, son habit-veste de drap vert à boutons noirs devait le gêner aux entournures et laissait voir, par la fente des parements, des poignets rouges habitués à être nus. Ses jambes, en bas bleus, sortaient d'un. pantalon jaunâtre très tiré par les bretelles. Il était chaussé de souliers forts, mal cirés, garnis de clous.

On commença la récitation des leçons. Il les écouta de toutes ses oreilles, attentif comme au sermon, n'osant même croiser les cuisses, ni s'appuyer sur le coude, et, à deux heures, quand la cloche sonna, le maître d'études fut obligé de l'avertir, pour qu'il se mît avec nous dans les rangs.

Nous avions l'habitude, en entrant en classe, de jeter nos casquettes par terre, afin d'avoir ensuite nos mains plus libres; il fallait, dès le seuil de la porte, les lancer sous le banc, de façon à frapper contre la muraille en faisant beaucoup de poussière; c'était là le genre.

Mais, soit qu'il n'eût pas remarqué cette manoeuvre ou qu'il n'eut osé s'y soumettre, la prière était finie que le nouveau tenait

encore sa casquette sur ses deux genoux. C'était une de ces coiffures d'ordre composite, où l'on retrouve les éléments du bonnet à poil, du chapska, du chapeau rond, de la casquette de loutre et du bonnet de coton, une de ces pauvres choses, enfin, dont la laideur muette a des profondeurs d'expression comme le visage d'un imbécile. Ovoïde et renflée de baleines, elle commençait par trois boudins circulaires; puis s'alternaient, séparés par une bande rouge, des losanges de velours et de poils de lapin; venait ensuite une façon de sac qui se terminait par un polygone cartonné, couvert d'une broderie en soutache compliquée, et d'où pendait, au bout d'un long cordon trop mince, un petit croisillon de fils d'or, en manière de gland. Elle était neuve; la visière brillait.

-- Levez-vous, dit le professeur.

Il se leva; sa casquette tomba. Toute la classe se mit à rire.

Il se baissa pour la reprendre. Un voisin la fit tomber d'un coup de coude, il la ramassa encore une fois.

-- Débarrassez-vous donc de votre casque, dit le professeur, qui était un homme d'esprit.

Il y eut un rire éclatant des écoliers qui décontenança le pauvre garçon, si bien qu'il ne savait s'il fallait garder sa casquette à la main, la laisser par terre ou la mettre sur sa tête. Il se rassit et la posa sur ses genoux.

-- Levez-vous, reprit le professeur, et dites-moi votre nom.

Le nouveau articula, d'une voix bredouillante, un nom inintelligible.

-- Répétez!

Le même bredouillement de syllabes se fit entendre, couvert par les huées de la classe.

-- Plus haut! cria le maître, plus haut!

Le nouveau, prenant alors une résolution extrême, ouvrit une bouche démesurée et lança à pleins poumons, comme pour appeler quelqu'un, ce mot: Charbovari.

Ce fut un vacarme qui s'élança d'un bond, monta en crescendo, avec des éclats de voix aigus (on hurlait, on aboyait, on trépignait, on répétait: Charbovari! Charbovari!), puis qui roula en notes isolées, se calmant à grand-peine, et parfois qui reprenait tout à

coup sur la ligne d'un banc où saillissait encore çà et là, comme un pétard mal éteint, quelque rire étouffé.

Cependant, sous la pluie des pensums, l'ordre peu à peu se rétablit dans la classe, et le professeur, parvenu à saisir le nom de Charles Bovary, se l'étant fait dicter, épeler et relire, commanda tout de suite au pauvre diable d'aller s'asseoir sur le banc de paresse, au pied de la chaire. Il se mit en mouvement, mais, avant de partir, hésita.

-- Que cherchez-vous? demanda le professeur.

-- Ma cas... fit timidement le nouveau, promenant autour de lui des regards inquiets.

-- Cinq cents vers à toute la classe! exclamé d'une voix furieuse, arrêta, comme le _Quos ego_, une bourrasque nouvelle. -- Restez donc tranquilles! continuait le professeur indigné, et s'essuyant le front avec son mouchoir qu'il venait de prendre dans sa toque: Quant à vous, le nouveau, vous me copierez vingt fois le verbe _ridiculus sum_.

Puis, d'une voix plus douce:

-- Eh! vous la retrouverez, votre casquette; on ne vous l'a pas volée!

Tout reprit son calme. Les têtes se courbèrent sur les cartons, et le nouveau resta pendant deux heures dans une tenue exemplaire, quoiqu'il y eût bien, de temps à autre, quelque boulette de papier lancée d'un bec de plume qui vînt s'éclabousser sur sa figure. Mais il s'essuyait avec la main, et demeurait immobile, les yeux baissés.

Le soir, à l'Étude, il tira ses bouts de manches de son pupitre, mit en ordre ses petites affaires, régla soigneusement son papier. Nous le vîmes qui travaillait en conscience, cherchant tous les mots dans le dictionnaire et se donnant beaucoup de mal. Grâce, sans doute, à cette bonne volonté dont il fit preuve, il dut de ne pas descendre dans la classe inférieure; car, s'il savait passablement ses règles, il n'avait guère d'élégance dans les tournures. C'était le curé de son village qui lui avait commencé le latin, ses parents, par économie, ne l'ayant envoyé au collège que le plus tard possible.

Son père, M. Charles-Denis-Bartholomé Bovary, ancien aide-chirurgien-major, compromis, vers 1812, dans des affaires de conscription, et forcé, vers cette époque, de quitter le service, avait alors profité de ses avantages personnels pour saisir au

passage une dot de soixante mille francs, qui s'offrait en la fille d'un marchand bonnetier, devenue amoureuse de sa tournure. Bel homme, hâbleur, faisant sonner haut ses éperons, portant des favoris rejoints aux moustaches, les doigts toujours garnis de bagues et habillé de couleurs voyantes, il avait l'aspect d'un brave, avec l'entrain facile d'un commis voyageur. Une fois marié, il vécut deux ou trois ans sur la fortune de sa femme, dînant bien, se levant tard, fumant dans de grandes pipes en porcelaine, ne rentrant le soir qu'après le spectacle et fréquentant les cafés. Le beau-père mourut et laissa peu de chose; il en fut indigné, se lança dans la fabrique, y perdit quelque argent, puis se retira dans la campagne, où il voulut faire valoir. Mais, comme il ne s'entendait guère plus en culture qu'en indiennes, qu'il montait ses chevaux au lieu de les envoyer au labour, buvait son cidre en bouteilles au lieu de le vendre en barriques, mangeait les plus belles volailles de sa cour et graissait ses souliers de chasse avec le lard de ses cochons, il ne tarda point à s'apercevoir qu'il valait mieux planter là toute spéculation.

Moyennant deux cents francs par an, il trouva donc à louer dans un village, sur les confins du pays de Caux et de la Picardie, une sorte de logis moitié ferme, moitié maison de maître; et, chagrin, rongé de regrets, accusant le ciel, jaloux contre tout le monde, il s'enferma dès l'âge de quarante-cinq ans, dégoûté des hommes, disait-il, et décidé à vivre en paix.

Sa femme avait été folle de lui autrefois; elle l'avait aimé avec mille servilités qui l'avaient détaché d'elle encore davantage. Enjouée jadis, expansive et tout aimante, elle était, en vieillissant, devenue (à la façon du vin éventé qui se tourne en vinaigre) d'humeur difficile, piaillarde, nerveuse. Elle avait tant souffert, sans se plaindre, d'abord, quand elle le voyait courir après toutes les gotons de village et que vingt mauvais lieux le lui renvoyaient le soir, blasé et puant l'ivresse! Puis l'orgueil s'était révolté. Alors elle s'était tue, avalant sa rage dans un stoïcisme muet, qu'elle garda jusqu'à sa mort. Elle était sans cesse en courses, en affaires. Elle allait chez les avoués, chez le président, se rappelait l'échéance des billets, obtenait des retards; et, à la maison, repassait, cousait, blanchissait, surveillait les ouvriers, soldait les mémoires, tandis que, sans s'inquiéter de rien, Monsieur, continuellement engourdi dans une somnolence boudeuse dont il ne se réveillait que pour lui dire des choses désobligeantes, restait à fumer au coin du feu, en crachant dans les cendres.

Quand elle eut un enfant, il le fallut mettre en nourrice. Rentré chez eux, le marmot fut gâté comme un prince. Sa mère le nourrissait de confitures; son père le laissait courir sans souliers, et, pour faire le philosophe, disait même qu'il pouvait

bien aller tout nu, comme les enfants des bêtes. À l'encontre des tendances maternelles, il avait en tête un certain idéal viril de l'enfance, d'après lequel il tâchait de former son fils, voulant qu'on l'élevât durement, à la spartiate, pour lui faire une bonne constitution. Il l'envoyait se coucher sans feu, lui apprenait à boire de grands coups de rhum et à insulter les processions. Mais, naturellement paisible, le petit répondait mal à ses efforts. Sa mère le traînait toujours après elle; elle lui découpait des cartons, lui racontait des histoires, s'entretenait avec lui dans des monologues sans fin, pleins de gaietés mélancoliques et de chatteries babillardes. Dans l'isolement de sa vie, elle reporta sur cette tête d'enfant toutes ses vanités éparses, brisées. Elle rêvait de hautes positions, elle le voyait déjà grand, beau, spirituel, établi, dans les ponts et chaussées ou dans la magistrature. Elle lui apprit à lire, et même lui enseigna, sur un vieux piano qu'elle avait, à chanter deux ou trois petites romances. Mais, à tout cela, M. Bovary, peu soucieux des lettres, disait que ce n'était pas la peine! Auraient-ils jamais de quoi l'entretenir dans les écoles du gouvernement, lui acheter une charge ou un fonds de commerce? D'ailleurs, avec du toupet, un homme réussit toujours dans le monde. Madame Bovary se mordait les lèvres, et l'enfant vagabondait dans le village.

Il suivait les laboureurs, et chassait, à coups de motte de terre, les corbeaux qui s'envolaient. Il mangeait des mûres le long des fossés, gardait les dindons avec une gaule, fanait à la moisson, courait dans le bois, jouait à la marelle sous le porche de l'église les jours de pluie, et, aux grandes fêtes, suppliait le bedeau de lui laisser sonner les cloches, pour se pendre de tout son corps à la grande corde et se sentir emporter par elle dans sa volée.

Aussi poussa-t-il comme un chêne. Il acquit de fortes mains, de belles couleurs.

À douze ans, sa mère obtint que l'on commençât ses études. On en chargea le curé. Mais les leçons étaient si courtes et si mal suivies, qu'elles ne pouvaient servir à grand-chose. C'était aux moments perdus qu'elles se donnaient, dans la sacristie, debout, à la hâte, entre un baptême et un enterrement; ou bien le curé envoyait chercher son élève après l'Angélus, quand il n'avait pas à sortir. On montait dans sa chambre, on s'installait: les moucherons et les papillons de nuit tournoyaient autour de la chandelle. Il faisait chaud, l'enfant s'endormait; et le bonhomme, s'assoupissant les mains sur son ventre, ne tardait pas à ronfler, la bouche ouverte. D'autres fois, quand M. le curé, revenant de porter le viatique à quelque malade des environs, apercevait Charles qui polissonnait dans la campagne, il l'appelait, le sermonnait un quart d'heure et profitait de l'occasion pour lui

faire conjuguer son verbe au pied d'un arbre. La pluie venait les interrompre, ou une connaissance qui passait. Du reste, il était toujours content de lui, disait même que le jeune homme avait beaucoup de mémoire.

Charles ne pouvait en rester là. Madame fut énergique. Honteux, ou fatigué plutôt, Monsieur céda sans résistance, et l'on attendit encore un an que le gamin eût fait sa première communion.

Six mois se passèrent encore; et, l'année d'après, Charles fut définitivement envoyé au collège de Rouen, où son père l'amena lui-même, vers la fin d'octobre, à l'époque de la foire Saint-Romain.

Il serait maintenant impossible à aucun de nous de se rien rappeler de lui. C'était un garçon de tempérament modéré, qui jouait aux récréations, travaillait à l'étude, écoutant en classe, dormant bien au dortoir, mangeant bien au réfectoire. Il avait pour correspondant un quincaillier en gros de la rue Ganterie, qui le faisait sortir une fois par mois, le dimanche, après que sa boutique était fermée, l'envoyait se promener sur le port à regarder les bateaux, puis le ramenait au collège dès sept heures, avant le souper. Le soir de chaque jeudi, il écrivait une longue lettre à sa mère, avec de l'encre rouge et trois pains à cacheter; puis il repassait ses cahiers d'histoire, ou bien lisait un vieux volume d'Anacharsis qui traînait dans l'étude. En promenade, il causait avec le domestique, qui était de la campagne comme lui.

À force de s'appliquer, il se maintint toujours vers le milieu de la classe; une fois même, il gagna un premier accessit d'histoire naturelle. Mais à la fin de sa troisième, ses parents le retirèrent du collège pour lui faire étudier la médecine, persuadés qu'il pourrait se pousser seul jusqu'au baccalauréat.

Sa mère lui choisit une chambre, au quatrième, sur l'Eau-de-Robec, chez un teinturier de sa connaissance: Elle conclut les arrangements pour sa pension, se procura des meubles, une table et deux chaises, fit venir de chez elle un vieux lit en merisier, et acheta de plus un petit poêle en fonte, avec la provision de bois qui devait chauffer son pauvre enfant. Puis elle partit au bout de la semaine, après mille recommandations de se bien conduire, maintenant qu'il allait être abandonné à lui-même.

Le programme des cours, qu'il lut sur l'affiche, lui fit un effet d'étourdissement: cours d'anatomie, cours de pathologie, cours de physiologie, cours de pharmacie, cours de chimie, et de botanique, et de clinique, et de thérapeutique, sans compter l'hygiène ni la matière médicale, tous noms dont il ignorait les étymologies et qui étaient comme autant de portes de sanctuaires pleins

d’augustes ténèbres.

Il n’y comprit rien; il avait beau écouter, il ne saisissait pas. Il travaillait pourtant, il avait des cahiers reliés, il suivait tous les cours; il ne perdait pas une seule visite. Il accomplissait sa petite tâche quotidienne à la manière du cheval de manège, qui tourne en place les yeux bandés, ignorant de la besogne qu’il broie.

Pour lui épargner de la dépense, sa mère lui envoyait chaque semaine, par le messager, un morceau de veau cuit au four, avec quoi il déjeunait le matin; quand il était rentré de l’hôpital, tout en battant la semelle contre le mur. Ensuite il fallait courir aux leçons, à l’amphithéâtre, à l’hospice, et revenir chez lui, à travers toutes les rues. Le soir, après le maigre dîner de son propriétaire, il remontait à sa chambre et se remettait au travail, dans ses habits mouillés qui fumaient sur son corps, devant le poêle rougi.

Dans les beaux soirs d’été; à l’heure où les rues tièdes sont vides, quand les servantes, jouent au volant sur le seuil des portes, il ouvrait sa fenêtre et s’accoudait. La rivière, qui fait de ce quartier de Rouen comme une ignoble petite Venise, coulait en bas, sous lui, jaune, violette ou bleue, entre ses ponts et ses grilles. Des ouvriers, accroupis au bord, lavaient leurs bras dans l’eau. Sur des perches partant du haut des greniers, des écheveaux de coton séchaient à l’air. En face, au-delà des toits, le grand ciel pur s’étendait, avec le soleil rouge se couchant. Qu’il devait faire bon là-bas! Quelle fraîcheur sous la hêtraie! Et il ouvrait les narines pour aspirer les bonnes odeurs de la campagne, qui ne venaient pas jusqu’à lui.

Il maigrit, sa taille s’allongea, et sa figure prit une sorte d’expression dolente qui la rendit presque intéressante.

Naturellement, par nonchalance; il en vint à se délier de toutes les résolutions qu’il s’était faites. Une fois, il manqua la visite, le lendemain son cours, et, savourant la paresse, peu à peu, n’y retourna plus.

Il prit l’habitude du cabaret, avec la passion des dominos. S’enfermer chaque soir dans un sale appartement public, pour y taper sur des tables de marbre de petits os de mouton marqués de points noirs, lui semblait un acte précieux de sa liberté, qui le rehaussait d’estime vis-à-vis de lui-même. C’était comme l’initiation au monde, l’accès des plaisirs défendus; et, en entrant, il posait la main sur le bouton de la porte avec une joie presque sensuelle. Alors, beaucoup de choses comprimées en lui, se dilatèrent; il apprit par coeur des couplets qu’il chantait aux

bienvenues, s'enthousiasma pour Béranger, sut faire du punch et connut enfin l'amour.

Grâce à ces travaux préparatoires, il échoua complètement à son examen d'officier de santé. On l'attendait le soir même à la maison pour fêter son succès.

Il partit à pied et s'arrêta vers l'entrée du village, où il fit demander sa mère, lui conta tout. Elle l'excusa, rejetant l'échec sur l'injustice des examinateurs, et le raffermit un peu, se chargeant d'arranger les choses. Cinq ans plus tard seulement, M. Bovary connut la vérité; elle était vieille, il l'accepta, ne pouvant d'ailleurs supposer qu'un homme issu de lui fût un sot.

Charles se remit donc au travail et prépara sans discontinuer les matières de son examen, dont il apprit d'avance toutes les questions par coeur. Il fut reçu avec une assez bonne note. Quel beau jour pour sa mère! On donna un grand dîner.

Où irait-il exercer son art? À Tostes. Il n'y avait là qu'un vieux médecin. Depuis longtemps madame Bovary guettait sa mort, et le bonhomme n'avait point encore plié bagage, que Charles était installé en face, comme son successeur.

Mais ce n'était pas tout que d'avoir élevé son fils, de lui avoir fait apprendre la médecine et découvert Tostes pour l'exercer: il lui fallait une femme. Elle lui en trouva une: la veuve d'un huissier de Dieppe, qui avait quarante-cinq ans et douze cents livres de rente.

Quoiqu'elle fût laide, sèche comme un cotret, et bourgeonnée comme un printemps, certes madame Dubuc ne manquait pas de partis à choisir. Pour arriver à ses fins, la mère Bovary fut obligée de les évincer tous, et elle déjoua même fort habilement les intrigues d'un charcutier qui était soutenu par les prêtres.

Charles avait entrevu dans le mariage l'avènement d'une condition meilleure, imaginant qu'il serait plus libre et pourrait disposer de sa personne et de son argent. Mais sa femme fut le maître; il devait devant le monde dire ceci, ne pas dire cela, faire maigre tous les vendredis, s'habiller comme elle l'entendait, harceler par son ordre les clients qui ne payaient pas. Elle décachetait ses lettres, épiait ses démarches, et l'écoutait, à travers la cloison, donner ses consultations dans son cabinet, quand il y avait des femmes.

Il lui fallait son chocolat tous les matins, des égards à n'en plus finir. Elle se plaignait sans cesse de ses nerfs, de sa poitrine, de ses humeurs. Le bruit des pas lui faisait mal; on

s’en allait, la solitude lui devenait odieuse; revenait-on près d’elle, c’était pour la voir mourir, sans doute. Le soir, quand Charles rentrait, elle sortait de dessous ses draps ses longs bras maigres, les lui passait autour du cou, et, l’ayant fait asseoir au bord du lit, se mettait à lui parler de ses chagrins: il l’oubliait, il en aimait une autre! On lui avait bien dit qu’elle serait malheureuse; et elle finissait en lui demandant quelque sirop pour sa santé et un peu plus d’amour.

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Part I
Chapter One

We were in class when the head-master came in, followed by a "new fellow," not wearing the school uniform, and a school servant carrying a large desk. Those who had been asleep woke up, and every one rose as if just surprised at his work.

The head-master made a sign to us to sit down. Then, turning to the class-master, he said to him in a low voice--

"Monsieur Roger, here is a pupil whom I recommend to your care; he'll be in the second. If his work and conduct are satisfactory, he will go into one of the upper classes, as becomes his age."

The "new fellow," standing in the corner behind the door so that he could hardly be seen, was a country lad of about fifteen, and taller than any of us. His hair was cut square on his forehead like a village chorister's; he looked reliable, but very ill at ease. Although he was not broad-shouldered, his short school jacket of green cloth with black buttons must have been tight about the arm-holes, and showed at the opening of the cuffs red wrists accustomed to being bare. His legs, in blue stockings, looked out from beneath yellow trousers, drawn tight by braces, He wore stout, ill-cleaned, hob-nailed boots.

We began repeating the lesson. He listened with all his ears, as attentive as if at a sermon, not daring even to cross his legs or lean on his elbow; and when at two o'clock the bell rang, the master was obliged to tell him to fall into line with the rest of us.

When we came back to work, we were in the habit of throwing our caps on the ground so as to have our hands more free; we used from the door to toss them under the form, so that they hit against the wall and made a lot of dust: it was "the thing."

But, whether he had not noticed the trick, or did not dare to attempt

it, the "new fellow," was still holding his cap on his knees even after prayers were over. It was one of those head-gears of composite order, in which we can find traces of the bearskin, shako, billycock hat, sealskin cap, and cotton night-cap; one of those poor things, in fine, whose dumb ugliness has depths of expression, like an imbecile's face. Oval, stiffened with whalebone, it began with three round knobs; then came in succession lozenges of velvet and rabbit-skin separated by a red band; after that a sort of bag that ended in a cardboard polygon covered with complicated braiding, from which hung, at the end of a long thin cord, small twisted gold threads in the manner of a tassel. The cap was new; its peak shone.

"Rise," said the master.

He stood up; his cap fell. The whole class began to laugh. He stooped to pick it up. A neighbor knocked it down again with his elbow; he picked it up once more.

"Get rid of your helmet," said the master, who was a bit of a wag.

There was a burst of laughter from the boys, which so thoroughly put the poor lad out of countenance that he did not know whether to keep his cap in his hand, leave it on the ground, or put it on his head. He sat down again and placed it on his knee.

"Rise," repeated the master, "and tell me your name."

The new boy articulated in a stammering voice an unintelligible name.

"Again!"

The same sputtering of syllables was heard, drowned by the tittering of the class.

"Louder!" cried the master; "louder!"

The "new fellow" then took a supreme resolution, opened an inordinately large mouth, and shouted at the top of his voice as if calling someone in the word "Charbovari."

A hubbub broke out, rose in crescendo with bursts of shrill voices (they yelled, barked, stamped, repeated "Charbovari! Charbovari"), then died away into single notes, growing quieter only with great difficulty, and now and again suddenly recommencing along the line of a form whence rose here and there, like a damp cracker going off, a stifled laugh.

However, amid a rain of impositions, order was gradually re-established in the class; and the master having succeeded in catching the name of "Charles Bovary," having had it dictated to him, spelt out, and re-read,

at once ordered the poor devil to go and sit down on the punishment form at the foot of the master's desk. He got up, but before going hesitated.

"What are you looking for?" asked the master.

"My c-a-p," timidly said the "new fellow," casting troubled looks round him.

"Five hundred lines for all the class!" shouted in a furious voice stopped, like the Quos ego*, a fresh outburst. "Silence!" continued the master indignantly, wiping his brow with his handkerchief, which he had just taken from his cap. "As to you, 'new boy,' you will conjugate 'ridiculus sum'** twenty times."

Then, in a gentler tone, "Come, you'll find your cap again; it hasn't been stolen."

*A quotation from the Aeneid signifying a threat.

**I am ridiculous.

Quiet was restored. Heads bent over desks, and the "new fellow" remained for two hours in an exemplary attitude, although from time to time some paper pellet flipped from the tip of a pen came bang in his face. But he wiped his face with one hand and continued motionless, his eyes lowered.

In the evening, at preparation, he pulled out his pens from his desk, arranged his small belongings, and carefully ruled his paper. We saw him working conscientiously, looking up every word in the dictionary, and taking the greatest pains. Thanks, no doubt, to the willingness he showed, he had not to go down to the class below. But though he knew his rules passably, he had little finish in composition. It was the cure of his village who had taught him his first Latin; his parents, from motives of economy, having sent him to school as late as possible.

His father, Monsieur Charles Denis Bartolome Bovary, retired assistant-surgeon-major, compromised about 1812 in certain conscription scandals, and forced at this time to leave the service, had taken advantage of his fine figure to get hold of a dowry of sixty thousand francs that offered in the person of a hosier's daughter who had fallen in love with his good looks. A fine man, a great talker, making his spurs ring as he walked, wearing whiskers that ran into his moustache, his fingers always garnished with rings and dressed in loud colours, he had the dash of a military man with the easy go of a commercial traveller.

Once married, he lived for three or four years on his wife's fortune, dining well, rising late, smoking long porcelain pipes, not coming in at night till after the theatre, and haunting cafes. The father-in-law

died, leaving little; he was indignant at this, "went in for the business," lost some money in it, then retired to the country, where he thought he would make money.

But, as he knew no more about farming than calico, as he rode his horses instead of sending them to plough, drank his cider in bottle instead of selling it in cask, ate the finest poultry in his farmyard, and greased his hunting-boots with the fat of his pigs, he was not long in finding out that he would do better to give up all speculation.

For two hundred francs a year he managed to live on the border of the provinces of Caux and Picardy, in a kind of place half farm, half private house; and here, soured, eaten up with regrets, cursing his luck, jealous of everyone, he shut himself up at the age of forty-five, sick of men, he said, and determined to live at peace.

His wife had adored him once on a time; she had bored him with a thousand servilities that had only estranged him the more. Lively once, expansive and affectionate, in growing older she had become (after the fashion of wine that, exposed to air, turns to vinegar) ill-tempered, grumbling, irritable. She had suffered so much without complaint at first, until she had seem him going after all the village drabs, and until a score of bad houses sent him back to her at night, weary, stinking drunk. Then her pride revolted. After that she was silent, burying her anger in a dumb stoicism that she maintained till her death. She was constantly going about looking after business matters. She called on the lawyers, the president, remembered when bills fell due, got them renewed, and at home ironed, sewed, washed, looked after the workmen, paid the accounts, while he, troubling himself about nothing, eternally besotted in sleepy sulkiness, whence he only roused himself to say disagreeable things to her, sat smoking by the fire and spitting into the cinders.

When she had a child, it had to be sent out to nurse. When he came home, the lad was spoilt as if he were a prince. His mother stuffed him with jam; his father let him run about barefoot, and, playing the philosopher, even said he might as well go about quite naked like the young of animals. As opposed to the maternal ideas, he had a certain virile idea of childhood on which he sought to mould his son, wishing him to be brought up hardily, like a Spartan, to give him a strong constitution. He sent him to bed without any fire, taught him to drink off large draughts of rum and to jeer at religious processions. But, peaceable by nature, the lad answered only poorly to his notions. His mother always kept him near her; she cut out cardboard for him, told him tales, entertained him with endless monologues full of melancholy gaiety and charming nonsense. In her life's isolation she centered on the child's head all her shattered, broken little vanities. She dreamed of high station; she already saw him, tall, handsome, clever, settled as an engineer or in the law. She taught him to read, and even, on an old

piano, she had taught him two or three little songs. But to all this Monsieur Bovary, caring little for letters, said, "It was not worth while. Would they ever have the means to send him to a public school, to buy him a practice, or start him in business? Besides, with cheek a man always gets on in the world." Madame Bovary bit her lips, and the child knocked about the village.

He went after the labourers, drove away with clods of earth the ravens that were flying about. He ate blackberries along the hedges, minded the geese with a long switch, went haymaking during harvest, ran about in the woods, played hop-scotch under the church porch on rainy days, and at great fetes begged the beadle to let him toll the bells, that he might hang all his weight on the long rope and feel himself borne upward by it in its swing. Meanwhile he grew like an oak; he was strong on hand, fresh of colour.

When he was twelve years old his mother had her own way; he began lessons. The cure took him in hand; but the lessons were so short and irregular that they could not be of much use. They were given at spare moments in the sacristy, standing up, hurriedly, between a baptism and a burial; or else the cure, if he had not to go out, sent for his pupil after the Angelus*. They went up to his room and settled down; the flies and moths fluttered round the candle. It was close, the child fell asleep, and the good man, beginning to doze with his hands on his stomach, was soon snoring with his mouth wide open. On other occasions, when Monsieur le Cure, on his way back after administering the viaticum to some sick person in the neighbourhood, caught sight of Charles playing about the fields, he called him, lectured him for a quarter of an hour and took advantage of the occasion to make him conjugate his verb at the foot of a tree. The rain interrupted them or an acquaintance passed. All the same he was always pleased with him, and even said the "young man" had a very good memory.

*A devotion said at morning, noon, and evening, at the sound of a bell. Here, the evening prayer.

Charles could not go on like this. Madame Bovary took strong steps. Ashamed, or rather tired out, Monsieur Bovary gave in without a struggle, and they waited one year longer, so that the lad should take his first communion.

Six months more passed, and the year after Charles was finally sent to school at Rouen, where his father took him towards the end of October, at the time of the St. Romain fair.

It would now be impossible for any of us to remember anything about him. He was a youth of even temperament, who played in playtime, worked in school-hours, was attentive in class, slept well in the dormitory, and ate well in the refectory. He had in loco parentis* a wholesale

ironmonger in the Rue Ganterie, who took him out once a month on Sundays after his shop was shut, sent him for a walk on the quay to look at the boats, and then brought him back to college at seven o'clock before supper. Every Thursday evening he wrote a long letter to his mother with red ink and three wafers; then he went over his history note-books, or read an old volume of "Anarchasis" that was knocking about the study. When he went for walks he talked to the servant, who, like himself, came from the country.

*In place of a parent.

By dint of hard work he kept always about the middle of the class; once even he got a certificate in natural history. But at the end of his third year his parents withdrew him from the school to make him study medicine, convinced that he could even take his degree by himself.

His mother chose a room for him on the fourth floor of a dyer's she knew, overlooking the Eau-de-Robec. She made arrangements for his board, got him furniture, table and two chairs, sent home for an old cherry-tree bedstead, and bought besides a small cast-iron stove with the supply of wood that was to warm the poor child.

Then at the end of a week she departed, after a thousand injunctions to be good now that he was going to be left to himself.

The syllabus that he read on the notice-board stunned him; lectures on anatomy, lectures on pathology, lectures on physiology, lectures on pharmacy, lectures on botany and clinical medicine, and therapeutics, without counting hygiene and materia medica--all names of whose etymologies he was ignorant, and that were to him as so many doors to sanctuaries filled with magnificent darkness.

He understood nothing of it all; it was all very well to listen--he did not follow. Still he worked; he had bound note-books, he attended all the courses, never missed a single lecture. He did his little daily task like a mill-horse, who goes round and round with his eyes bandaged, not knowing what work he is doing.

To spare him expense his mother sent him every week by the carrier a piece of veal baked in the oven, with which he lunched when he came back from the hospital, while he sat kicking his feet against the wall. After this he had to run off to lectures, to the operation-room, to the hospital, and return to his home at the other end of the town. In the evening, after the poor dinner of his landlord, he went back to his room and set to work again in his wet clothes, which smoked as he sat in front of the hot stove.

On the fine summer evenings, at the time when the close streets are empty, when the servants are playing shuttle-cock at the doors, he

opened his window and leaned out. The river, that makes of this quarter of Rouen a wretched little Venice, flowed beneath him, between the bridges and the railings, yellow, violet, or blue. Working men, kneeling on the banks, washed their bare arms in the water. On poles projecting from the attics, skeins of cotton were drying in the air. Opposite, beyond the roots spread the pure heaven with the red sun setting. How pleasant it must be at home! How fresh under the beech-tree! And he expanded his nostrils to breathe in the sweet odours of the country which did not reach him.

He grew thin, his figure became taller, his face took a saddened look that made it nearly interesting. Naturally, through indifference, he abandoned all the resolutions he had made. Once he missed a lecture; the next day all the lectures; and, enjoying his idleness, little by little, he gave up work altogether. He got into the habit of going to the public-house, and had a passion for dominoes. To shut himself up every evening in the dirty public room, to push about on marble tables the small sheep bones with black dots, seemed to him a fine proof of his freedom, which raised him in his own esteem. It was beginning to see life, the sweetness of stolen pleasures; and when he entered, he put his hand on the door-handle with a joy almost sensual. Then many things hidden within him came out; he learnt couplets by heart and sang them to his boon companions, became enthusiastic about Beranger, learnt how to make punch, and, finally, how to make love.

Thanks to these preparatory labours, he failed completely in his examination for an ordinary degree. He was expected home the same night to celebrate his success. He started on foot, stopped at the beginning of the village, sent for his mother, and told her all. She excused him, threw the blame of his failure on the injustice of the examiners, encouraged him a little, and took upon herself to set matters straight. It was only five years later that Monsieur Bovary knew the truth; it was old then, and he accepted it. Moreover, he could not believe that a man born of him could be a fool.

So Charles set to work again and crammed for his examination, ceaselessly learning all the old questions by heart. He passed pretty well. What a happy day for his mother! They gave a grand dinner.

Where should he go to practice? To Tostes, where there was only one old doctor. For a long time Madame Bovary had been on the look-out for his death, and the old fellow had barely been packed off when Charles was installed, opposite his place, as his successor.

But it was not everything to have brought up a son, to have had him taught medicine, and discovered Tostes, where he could practice it; he must have a wife. She found him one--the widow of a bailiff at Dieppe--who was forty-five and had an income of twelve hundred francs. Though she was ugly, as dry as a bone, her face with as many pimples as

the spring has buds, Madame Dubuc had no lack of suitors. To attain her ends Madame Bovary had to oust them all, and she even succeeded in very cleverly baffling the intrigues of a port-butcher backed up by the priests.

Charles had seen in marriage the advent of an easier life, thinking he would be more free to do as he liked with himself and his money. But his wife was master; he had to say this and not say that in company, to fast every Friday, dress as she liked, harass at her bidding those patients who did not pay. She opened his letter, watched his comings and goings, and listened at the partition-wall when women came to consult him in his surgery.

She must have her chocolate every morning, attentions without end. She constantly complained of her nerves, her chest, her liver. The noise of footsteps made her ill; when people left her, solitude became odious to her; if they came back, it was doubtless to see her die. When Charles returned in the evening, she stretched forth two long thin arms from beneath the sheets, put them round his neck, and having made him sit down on the edge of the bed, began to talk to him of her troubles: he was neglecting her, he loved another. She had been warned she would be unhappy; and she ended by asking him for a dose of medicine and a little more love.

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THE BURMESE.
The Project Gutenberg EBook of An English Girl's First Impressions of Burmah, by Beth Ellis

> "We are merry folk who would make all merry as ourselves."--"Yeomen of the Guard."

On my first evening in Remyo I was sitting in the drawing-room, waiting for the announcement of dinner, when suddenly, the curtain across the doorway was pulled aside, and a native peered into the room. His movements were rapid and stealthy, and betokened a desire for escape or concealment. On seeing me he slipped past the curtain into the room, and crouched down, as tho' endeavouring to hide himself from without. Then in the same bending attitude, he glided past the uncurtained window, across the room where I sat lost in astonishment, and on reaching my chair, sank on to his knees, placed his raised hands together in a supplicating manner, and exclaimed in a deferential and prayerful voice "Sarsiar."!

For a moment I stared at him in wonder, unable to comprehend his attitude; and then in a flash I understood all.

He was in terrible danger, someone was pursuing him; to escape he had slipped into the house, and was now imploring me to conceal or to defend him. I had no thought of hesitation, whatever might be his crime he must not be left to the rough justice of his pursuers, he must be protected until the matter could be properly inquired into.

I sprang up and hurried to the window to reconnoitre; four natives stood in the road; no one else was in sight; perhaps the pursuers were already in the house.

"Sarsiar, sarsiar, thekinma," he repeated, (or something that sounded like that).

"All right, all right" I said soothingly: "don't be frightened, you're safe here," and so saying I quietly bolted the outer door, fastened the windows, and proceeded to put the room in a state of defence. My presence of mind evidently astonished him, he stared at me a moment and once more took up his cry of "Sarsiar, sarsiar".

"It doesn't matter though a dozen Sarsiars are after you," I cried impatiently: "you are quite safe here; so tell me who is this "Sarsiar," and what have you done to him?"

But the wretched man only became still more excited, he crouched lower than ever, he waved his arms, and burst into a torrent of Burmese eloquence, in which again and again, occurred the name of his pursuer, of this much dreaded "Sarsiar."

At last, being quite unable to either comprehend or calm him, I called aloud to my sister to come and reassure him in his own tongue. She came, exchanged a few hurried remarks with the fugitive, and then, to my utter astonishment and indignation, burst out laughing. I angrily demanded an explanation, and when she had recovered, she gave it.

The native was no terrified victim, flying from a savage foe, but the head boy announcing that dinner was ready!

The stealthy walk, the crouched air of concealment, the supplicating attitude, were merely expressions of respect, it being quite contrary to the Burman's idea of politeness to raise his head above that of his master.

This excessive politeness on the part of the Burman is highly commendable, but apt to be inconvenient. It is embarrassing to be waited on by a man who persists in scuttling about with his body bent almost double, and who sinks on his knees on every available occasion; it gives him an air of instability. Some were so full of respect as to dismount from their ponies and walk past the "Thekins" when they met us in the

road. It must delay business immensely, but no true Burman would allow himself to be influenced by such a minor consideration.

The Burman is much given to contemplation. He is frequently seized with a fit of meditation in the midst of most important work, and will sit for hours, immovable, gazing steadily into vacancy, puffing at his huge cheroot, and thinking.

So, history relates, did Socrates sit for three days and nights, but Socrates, poor man, had no cheroot to soothe him. The results of Socrates' meditation on that particular occasion are unknown; so too are the results of the rapt meditations of the Burman. Never by word or deed does he betray what thoughts occupy his mind on these ever recurring occasions, but someday, who knows? he may be moved to speak, and then where will be the wisdom of the East and of the West, when compared with the wisdom of this contemplative nation? Surely it will become small and of no account, and be no more thought on!

For these fits of meditation are undoubtedly inspired! They may overtake him at any time, absorbingly, unexpectedly, in a manner highly inconvenient to all with whom he may come in contact.

I say he is liable continually to such attacks, but certain surroundings, and circumstances seem more conducive than others to such contemplative meditation.

For example, if despatched on an important message, such an attack almost invariably seizes him, and the messenger will remain for hours, seated by the road side lost in thought, while his impatient master sits raging and fuming at home, waiting in vain for an answer to his note. On such an occasion the Burman loses all sense of time, and his expression of naive astonishment, and patient martyr-like sufferance, when blamed for his delay, is utterly disarming.

Again, the dusting of a room is most conducive to meditation. I have frequently seen a native stand for half an hour or more, immovable, duster in hand, gazing from the window, lost in abstraction. But this trait, I am told by English housewives, is not confined to Burmese servants alone. Dusting, I conclude, has a soothing effect on the nerves.

When the Burman does work, he works with an energy and violence which is as astonishing as it is unnecessary. To see a loogalay in his energetic movements, dusting or tidying a room is a lesson to sluggards.

He takes his stand in the centre of the room, and performs a series of wonderfully intricate and far reaching flag signals with the duster. Then, after clearing away the broken china and other debris, he slowly makes a tour of the room, striking violently at each article of

furniture once or twice with the corner of the afore-mentioned duster, and shaking the same menacingly in the face of every picture and ornament. Then he turns upside down the books and papers, carefully hides his mistress's work bag, and his master's favourite pipe, rearranges the furniture and the ornaments, which have come through scatheless, to suit his own taste, and the room is finished. In the matter of floor washing the Burman as a rule prefers to carry out the precepts stated in Mr. Chevallier's song: "What's the good of anything? Why nothing." To him it appears an act of supererogation to wash to-day the floor, which must certainly be dirtied again on the morrow.

But if he be induced, by the stern commands of his mistress to undertake the task, then indeed is it a day of mourning and discomfort for the whole household. No spring cleaning carried on by the most uncompromising and unsympathetic British matron, can approach the misery and upset caused by Burmese floor washing.

Every male member of the establishment, from the coolie who is mending the compound path, to the head boy, is recruited to the work, and reinforcements of "brothers" from the village are called in to assist. Every piece of furniture in the place is turned upside down, and then large cans of water are upset "promiscuous like" here and there, until the whole house is deluged. This accomplished, the concourse of servants commences to paddle about the house, rescuing books and cushions from the ravages of the flood, and flapping at the water with cloth and brooms. No definite scheme is adopted, but the chief idea seems to be to wet as much of the floor, walls, and furniture as possible. After this amusement has been pursued for about three hours, the floods are swept away through the drawing-room and out at the front door, and the damp and exhausted servants, after proudly announcing: "Floor much clean now, missis," retire triumphant, to rest their weary limbs for the remainder of the day. We did not often indulge our desire for cleanliness in this respect.

The Burman is a great lover of ceremonies and processions. On certain festival days long picturesque pageants wind thro' the villages on their way to the pagodas; cart after cart drawn by gaily decorated bullocks and filled with brightly dressed occupants, many of whom wear fancy disguises, and dance and posture during the whole of the ride.

It is a strange sight to see "grave and reverend seigneurs" from the village, arrayed in the most extraordinary costumes, reminding one of an English Guy Fawkes procession, standing at the front of a cart, posturing and pulling faces, in a manner that would be ludicrous, were it not so evidently full of meaning and solemnity. Imitation boats, dragons and beasts of all sorts take part in these processions, which for grotesqueness, brilliance of colour, and originality of arrangement are equalled only in a Drury Lane pantomime or the Lord Mayor's Show. But the soul of the Burman is not satisfied with his great half yearly

festivals, nor even with the smaller festivities that take place at every birth, wedding, death, "ear-boring," or other ceremonious occasion. He seeks ever for other opportunities for procession and masquerade.

Our Burmese servants found vent for their feelings in waiting at table. They performed their duties with as much stateliness and ceremony as time, and our impatient appetites would permit.

No dish, plate, or spoon was brought without the co-operation of the three loogalays who were in attendance, and the lord chamberlain himself could not have conducted the course of the meal with more dignity than did our Burmese butler.

But the greatest triumph was achieved at breakfast time when we partook of boiled eggs. The clink of the cups, followed by a hush of expectancy heralded what was coming. The purdah would be drawn aside by an unseen hand, and the procession would march solemnly into the room, the three loogalays, one behind the other, bearing each in his hand a very large dinner plate, in the centre of which stood a small egg in its humble egg-cup.

Into the room and round the table they would march, then dividing, each with a bow deposited his precious burden before the person for whom it was intended, after which the procession was again formed, and disappeared slowly behind the curtain: all this with an air of solemnity and display that would not have disgraced a royal levee. Why this ceremony was confined to eggs, why the porridge and bacon were not equally favoured I cannot tell, I merely state the facts as I observed them, leaving the explanation to others more discerning than I.

The greatest treat our own loogalays ever enjoyed in this respect was brought about one day by a slight mistake I made in giving an order to Po-Sin, the head butler. My grasp of the language being but slight, my speech was often a trifle faulty, but I gave orders with a vigorous confidence, and aided by gesture and "pigeon English" I imagined that I made myself tolerably comprehensible. On the occasion to which I refer, I had prepared my sentence elaborately, and summoning Po-Sin, I informed him that his master would be at home and would want tea at three o'clock. There must have been some mistake somewhere. Possibly, I confused the word meaning "office" with the Burmese for "three o'clock." But whatever be the explanation, about a quarter of an hour later, chancing to look out of the window, I beheld a procession winding its way along the road to the Court House, and bearing with it our afternoon tea equipage displayed to the highest advantage. At the head marched Po-Sin, proudly brandishing the teapot, then Po-Mya bearing the muffins, Po Thin with the tray and tea-cups, and behind, in regular order, the other numerous members of our establishment, each bearing some dish, jug, or spoon. They had gone too far to be overtaken, tho' they walked

with becoming dignity, so with deep foreboding, I watched them disappear round the corner of the road leading to the Court House.

Presently I saw the disconcerted procession returning, headed this time by my infuriated brother-in-law, who had been interrupted in the midst of an important case, by the solemn entrance of the tea bearers. The servants looked depressed and disappointed. I think they had hoped the procession might be a weekly affair. Like "Brer Rabbit," I prudently lay low until my brother's wrath had exhausted itself.

The Burman has the reputation of being a keen sportsman, and certainly, his excitement is intense on every sporting occasion, especially in games of strength and skill. But he does not excel in these. His intentions are doubtless good, but he lacks pluck and determination.

This is especially evident when a loogalay fields for his master at cricket. He will watch the game with deepest interest, loudly applauding every hit, and when the ball speeds in his direction his excitement and pride are unbounded. He runs to meet it with outstretched arms, shouting wildly, then, as the ball nears him, and the audience hold their breath, expecting a wonderful catch or piece of fielding, he quietly steps aside, allows the ball to fly past him, and then trots gently after it, overtaking it some few yards over the boundary. His fellow natives view the performance with pride, and yell with admiration when he finally secures the ball and, carrying it within an easy throwing distance of the pitch, rolls it gently back to the bowler.

The interest taken by the natives in football is overpowering, and a spectator has been known to stick a knife into the calf of one of the most active of the players on the opposing side, who happened to be standing near the "touch line." A new and unexpected source of danger in the football field.

The two chief drawbacks to the Burman servant are, firstly, his intense self-satisfaction and conceit, and secondly, his intolerable superstition.

It is impossible to find fault with a Burman. He receives all complaints with a look of such absolute astonishment and reproach that the complainant is at once disarmed. In his own eyes the Burman can do no wrong, and if other folk do not entirely concur in this opinion, that is their misfortune and not his fault. He is always quite pleased with himself, and regards with a pitying contempt all who are not equally so.

Overpowering superstition is a deeply rooted characteristic of the race, and I rather suspect, a very convenient one occasionally. The Burman will do nothing on an unlucky day or hour, and in awaiting the propitious moment, the duty is frequently left undone altogether. This is apt to be inconvenient to others, if the duty in question be the

delivery of an important message, or the preparation of dinner. But I have sometimes wondered whether this particular superstition might not advantageously be introduced into England, where it would be so exceedingly useful to the school boy at the end of the holidays, and to many other folk besides.

In private life the Burman carries his superstition to a ridiculous extent. No ceremony can take place, no festival be held, the building of a house cannot even be commenced until the wise man has declared the hour and place to be propitious.

All sorts of magical contrivances to prevent the entrance of wicked "nats" and other evil spirits, are erected outside nearly every house and village, and charms and horoscopes are believed in absolutely by all save the best educated Burmans.

They are a fickle people. Their lives being uneventful they love to vary them by constant small changes, and to enliven them by the excitement of gambling, which is the great vice of the country. We had a Burmese maid who displayed this love of change to a most astonishing degree. After being with us about two months she suddenly announced one morning that she had fever and must go and rest. Accordingly she disappeared for several days, and when we sent to enquire after her we learnt that she had recovered from her attack of fever, but was coming back to us no more, as she had got married. In about a fortnight she reappeared, saying calmly that she was now tired of being married, and was quite ready to return to her work after her little change.

Though he strongly objects to work himself the Burman likewise objects to see anyone else work. Whenever I endeavoured to clean my bicycle, our loogalays were terribly grieved. They sought me out in the quiet corner to which I had retired, and stood round me with the most shocked expressions, waving brooms and dusters, and beseeching me by all their most expressive gestures to leave the task to them. Sometimes they embarrassed me so much by all these attentions that I was obliged to consent, but always felt sorry afterwards; they are not satisfactory bicycle cleaners. The handle bars they polished again and again, but the rest of the machine struck them as uninteresting, and they left it severely alone.

My experience of the Burman was not confined altogether to our own servants, there were many in the village with whom I had a bowing acquaintance, but owing to my ignorance of the language I could not hope to become intimate with them and their families.

They appeared to take a great interest in us and our possessions. Two little Burmese ladies in particular, wives of the chief men of the village, paid us constant visits. They would bring us presents of flowers and vegetables, offer these, and then sit on the floor and stare

resolutely at us for the space of half an hour, at the end of which time they would suddenly make a profound obeisance and depart.

Conversation was impossible, as neither party knew the other's language, but we found this silent contemplation so embarrassing, that, after enduring it twice, we endeavoured on the third visit to entertain them by showing them pictures, trinkets, or anything we thought might amuse them. But with no great success; they admired the things and then immediately returned to their former occupation of staring, until at last I thought of the piano (which at that time was still in a healthy condition), opened it, and began to play. That interested them immensely, as they could not understand whence the sound came. They would stand happily for any length of time, gingerly striking a note, and listening to the tone with the greatest wonder and delight.

But what pleased them more than anything was a china doll, belonging to my little niece, which shut and opened its eyes. Such a marvel had never been seen before, and the day after our visitors had discovered it, a large deputation from the village waited upon us, with a request to see the wonder. As from that time the doll frequently disappeared for a day or two, we rather suspected the ayah was turning an honest penny, by borrowing it to hire out for exhibition at various villages round, whither the rumour of its fame had already spread.

Our visitors took the greatest interest in our garments, and when their first shyness had worn off, would subject our costumes to a minute examination that was a little trying.

They always arrayed themselves in their best garments when they came to see us, and very dainty they looked in their bright dresses of pink, green, or yellow silk, with flowers and ornaments in their black hair. The Burmese ladies are deservedly described as charming, and they understand the art of dress, and blending colours to perfection. They are reported to be very witty and amusing, as well as charming in appearance, and certainly when my brother happened to be at home on the occasion of their visits, they chattered to him very merrily, and seemed to thoroughly enjoy their talk with an Englishman.

Another visitor of ours was the thugyi, (the head man of the village), a very fine looking old man with one of the handsomest heads I have ever seen. He was taller than the majority of Burmans, and in the flowing white garments which he always wore, presented a splendid picture which I longed to paint. His manners were stately and dignified, and he treated us with the most royal courtesy, as though he were an emperor at least.

The chief hpoongyi (priest) of Remyo was a dear old man, with a beautifully tender expression. At his invitation we all went to visit him one day, and he showed us over the kyaung, with its numerous images,

bell, and quaint pictures of saints and devils. He was an enthusiastic gardener and showed us proudly over his domain, giving us much advice on the management of plants, and offering to transplant anything we admired to our own garden. A hpoongyi's life must be very peaceful and happy, though perhaps a trifle dull. His chief occupation seems to be meditation, which to us western folk appears distinctly monotonous.

Visits to the native bazaar afford endless amusement. Natives of all descriptions are gathered there, and the scene is most varied. The picturesque Burmans, giggling Chinese, chattering Madrassees, stately Parsees, solemn-faced Shans, and many other nationalities, swarm in the narrow streets and round the stalls of the bazaar. The stalls are large platforms raised about three feet from the ground, with overhanging roofs. The seller sits in the middle of his stall with his wares spread round him, and keeps up a running flow of conversation the whole day long.

There never appeared to be much to purchase in the Remyo bazaar except a few silks and the most unpalatable looking foods, but I delighted to go there in order to watch the people. "Bazaar day," to the Burman is one big joke, and he enjoys it thoroughly. The girls wear their most becoming costumes, and seated in the midst of their lovely silks, form a picture dainty enough to attract any man's attention. They are charming, and are quite aware of the fact.

I ventured down once or twice to the bazaar with my camera, but they did not understand it, and regarded me with suspicion; indeed, the mother of one little Shan laddie, whose picture I wished to take, worked herself up into such a state of wrath and terror that I was obliged to desist. I fancy she thought I was bewitching the poor little fellow.

My private opinion is, that in revenge for my attempt on her son, she must have induced one of their wise men to curse my kôdak, for though I took photographs with great vigour and confidence during my travels, not a single one of them developed. It is a singularly distressing employment to sit long hours in a stuffy dark room, developing photographs which steadily refuse to develop. I have met with many sad experiences in my long and chequered career, but I think this was the most disappointing.

My one attempt at shopping by gesture in the bazaar was not an unqualified success. I selected an aged and kindly looking stall keeper, and proceeded to collect together in a heap the few small articles I desired to purchase. During this proceeding she watched my actions with astonishment and some suspicion, but the latter feeling was set at rest when I produced a rupee and offered it to her. She took it, and while she sought the change, I pocketed my purchases.

[Illustration: NATIVE BAZAAR AT REMYO]

But when she returned, her face expressed the greatest consternation, and she burst into a torrent of Burmese. Quite at a loss to understand her, I hurriedly offered her more money, but she refused it with scorn, and continued her explanations and entreaties, in which the numerous spectators of the scene presently joined, laughing as though it were the greatest joke in the world.

Presently the old lady picked up a bobbin of cotton, such as I had just bought, and waved it frantically in my face; I mechanically took it and pocketed it also. At this action on my part the spectators became still more hilarious, but the old lady looked annoyed, evidently considering the matter was getting beyond a joke.

At last, in desperation, I pulled out all my purchases and flung them on the stall. To my astonishment this proved to be precisely what she desired; the good lady beamed with satisfaction, gathered them together with her own fair hands, and returned them, and my change, to me with many bows and smiles. I do not know to this day what was the reason of her excitement. Judging by the intense amusement it caused the spectators, I should say the story will serve as a popular after dinner anecdote for many generations of Burmans.

I do not think anyone but a Burman could find much amusement in their dearly beloved Pwés. The dances, composed entirely of posturing and grouping, are most monotonous, and the music is distinctly an unpleasant noise from a European point of view. Yet these easily satisfied folk crowd to such entertainments (which occasionally last many days) and camp out round the temporary building in which they are performed. They seem to derive the greatest enjoyment from watching these interminable performances, following the inevitable dramatic "Prince and Princess" through their adventures, and chuckling over the vulgar jokes of the clown.

The Burman loves to laugh. He is as equally amused at a fire or a drowning fatality in real life, as when in the play the clown trips up a fellow actor.

His proneness to laughter is annoying sometimes, especially if one misses a drive at golf, or falls down stairs (either of which misfortunes appear to him very droll) but on the whole his keen appreciation of "humour" helps him very comfortably through life.

We modern Europeans may think we have a higher sense of humour than these simple folk; but who is to judge?

The Burman is, perhaps, after all that truest philosopher who finds

latent humour in all things, and makes the most of it--still, I pray that, for his sake, his keenness of appreciation may not become more highly developed, or some day he will meet a pun, and it will kill him.

THE STORY OF PAULINE BONAPARTE

The Project Gutenberg EBook of *Famous Affinities of History*, Vol 1-4, Complete, by Lyndon Orr

It was said of Napoleon long ago that he could govern emperors and kings, but that not even he could rule his relatives. He himself once declared:

"My family have done me far more harm than I have been able to do them good."

It would be an interesting historical study to determine just how far the great soldier's family aided in his downfall by their selfishness, their jealousy, their meanness, and their ingratitude.

There is something piquant in thinking of Napoleon as a domestic sort of person. Indeed, it is rather difficult to do so. When we speak his name we think of the stern warrior hurling his armies up bloody slopes and on to bloody victory. He is the man whose steely eyes made his haughtiest marshals tremble, or else the wise, far-seeing statesman and lawgiver; but decidedly he is not a household model. We read of his sharp speech to women, of his outrageous manners at the dinner-table, and of the thousand and one details which Mme. de Remusat has chronicled--and perhaps in part invented, for there has always existed the suspicion that her animus was that of a woman who had herself sought the imperial favor and had failed to win it.

But, in fact, all these stories relate to the Napoleon of courts and palaces, and not to the Napoleon of home. In his private life this great man was not merely affectionate and indulgent, but he even showed a certain weakness where his relatives were concerned, so that he let them prey upon him almost without end.

He had a great deal of the Italian largeness and lavishness of character with his family. When a petty officer he nearly starved himself in order to give his younger brother, Louis, a military education. He was devotedly fond of children, and they were fond of him, as many anecdotes attest. His passionate love for Josephine before he learned of her infidelity is almost painful to read of; and even afterward, when he had been disillusioned, and when she was paying Fouche a thousand francs a day to spy upon Napoleon's every action, he still treated her with

friendliness and allowed her extravagance to embarrass him.

He made his eldest brother, Joseph, King of Spain, and Spain proved almost as deadly to him as did Russia. He made his youngest brother, Jerome, King of Westphalia, and Jerome turned the palace into a pigsty and brought discredit on the very name of Bonaparte. His brother Louis, for whom he had starved himself, he placed upon the throne of Holland, and Louis promptly devoted himself to his own interests, conniving at many things which were inimical to France. He was planning high advancement for his brother Lucien, and Lucien suddenly married a disreputable actress and fled with her to England, where he was received with pleasure by the most persistent of all Napoleon's enemies.

So much for his brothers--incompetent, ungrateful, or openly his foes. But his three sisters were no less remarkable in the relations which they bore to him. They have been styled "the three crowned courtesans," and they have been condemned together as being utterly void of principle and monsters of ingratitude.

Much of this censure was well deserved by all of them--by Caroline and Elise and Pauline. But when we look at the facts impartially we shall find something which makes Pauline stand out alone as infinitely superior to her sisters. Of all the Bonapartes she was the only one who showed fidelity and gratitude to the great emperor, her brother. Even Mme. Mere, Napoleon's mother, who beyond all question transmitted to him his great mental and physical power, did nothing for him. At the height of his splendor she hoarded sous and francs and grumblingly remarked:

"All this is for a time. It isn't going to last!"

Pauline, however, was in one respect different from all her kindred. Napoleon made Elise a princess in her own right and gave her the Grand Duchy of Tuscany. He married Caroline to Marshal Murat, and they became respectively King and Queen of Naples. For Pauline he did very little--less, in fact, than for any other member of his family--and yet she alone stood by him to the end.

This feather-headed, languishing, beautiful, distracting morsel of frivolity, who had the manners of a kitten and the morals of a cat, nevertheless was not wholly unworthy to be Napoleon's sister. One has to tell many hard things of her; and yet one almost pardons her because of her underlying devotion to the man who made the name of Bonaparte illustrious for ever. Caroline, Queen of Naples, urged her husband to turn against his former chief. Elise, sour and greedy, threw in her fortunes with the Murats. Pauline, as we shall see, had the one redeeming trait of gratitude.

To those who knew her she was from girlhood an incarnation of what used to be called "femininity." We have to-day another and a higher

definition of womanhood, but to her contemporaries, and to many modern writers, she has seemed to be first of all woman--"woman to the tips of her rosy finger-nails," says Levy. Those who saw her were distracted by her loveliness. They say that no one can form any idea of her beauty from her pictures. "A veritable masterpiece of creation," she had been called. Frederic Masson declares:

She was so much more the typical woman that with her the defects common to women reached their highest development, while her beauty attained a perfection which may justly be called unique.

No one speaks of Pauline Bonaparte's character or of her intellect, but wholly of her loveliness and charm, and, it must be added, of her utter lack of anything like a moral sense.

Even as a child of thirteen, when the Bonapartes left Corsica and took up their abode in Marseilles, she attracted universal attention by her wonderful eyes, her grace, and also by the utter lack of decorum which she showed. The Bonaparte girls at this time lived almost on charity. The future emperor was then a captain of artillery and could give them but little out of his scanty pay.

Pauline--or, as they called her in those days, Paulette--wore unbecoming hats and shabby gowns, and shoes that were full of holes. None the less, she was sought out by several men of note, among them Freron, a commissioner of the Convention. He visited Pauline so often as to cause unfavorable comment; but he was in love with her, and she fell in love with him to the extent of her capacity. She used to write him love letters in Italian, which were certainly not lacking in ardor. Here is the end of one of them:

I love you always and most passionately. I love you for ever, my beautiful idol, my heart, my appealing lover. I love you, love you, love you, the most loved of lovers, and I swear never to love any one else!

This was interesting in view of the fact that soon afterward she fell in love with Junot, who became a famous marshal. But her love affairs never gave her any serious trouble; and the three sisters, who now began to feel the influence of Napoleon's rise to power, enjoyed themselves as they had never done before. At Antibes they had a beautiful villa, and later a mansion at Milan.

By this time Napoleon had routed the Austrians in Italy, and all France was ringing with his name. What was Pauline like in her maidenhood? Arnault says:

She was an extraordinary combination of perfect physical beauty and the strangest moral laxity. She was as pretty as you please, but utterly unreasonable. She had no more manners than a school-girl--talking

incoherently, giggling at everything and nothing, and mimicking the most serious persons of rank.

General de Ricard, who knew her then, tells in his monograph of the private theatricals in which Pauline took part, and of the sport which they had behind the scenes. He says:

The Bonaparte girls used literally to dress us. They pulled our ears and slapped us, but they always kissed and made up later. We used to stay in the girls' room all the time when they were dressing.

Napoleon was anxious to see his sisters in some way settled. He proposed to General Marmont to marry Pauline. The girl was then only seventeen, and one might have had some faith in her character. But Marmont was shrewd and knew her far too well. The words in which he declined the honor are interesting:

"I know that she is charming and exquisitely beautiful; yet I have dreams of domestic happiness, of fidelity, and of virtue. Such dreams are seldom realized, I know. Still, in the hope of winning them--"

And then he paused, coughed, and completed what he had to say in a sort of mumble, but his meaning was wholly clear. He would not accept the offer of Pauline in marriage, even though she was the sister of his mighty chief.

Then Napoleon turned to General Leclerc, with whom Pauline had for some time flirted, as she had flirted with almost all the officers of Napoleon's staff. Leclerc was only twenty-six. He was rich and of good manners, but rather serious and in poor health. This was not precisely the sort of husband for Pauline, if we look at it in the conventional way; but it served Napoleon's purpose and did not in the least interfere with his sister's intrigues.

Poor Leclerc, who really loved Pauline, grew thin, and graver still in manner. He was sent to Spain and Portugal, and finally was made commander-in-chief of the French expedition to Haiti, where the famous black rebel, Toussaint l'Ouverture, was heading an uprising of the negroes.

Napoleon ordered Pauline to accompany her husband. Pauline flatly refused, although she made this an occasion for ordering "mountains of pretty clothes and pyramids of hats." But still she refused to go on board the flag-ship. Leclerc expostulated and pleaded, but the lovely witch laughed in his face and still persisted that she would never go.

Word was brought to Napoleon. He made short work of her resistance.

"Bring a litter," he said, with one of his steely glances. "Order

six grenadiers to thrust her into it, and see that she goes on board forthwith."

And so, screeching like an angry cat, she was carried on board, and set sail with her husband and one of her former lovers. She found Haiti and Santo Domingo more agreeable than she had supposed. She was there a sort of queen who could do as she pleased and have her orders implicitly obeyed. Her dissipation was something frightful. Her folly and her vanity were beyond belief.

But at the end of two years both she and her husband fell ill. He was stricken down by the yellow fever, which was decimating the French army. Pauline was suffering from the results of her life in a tropical climate. Leclerc died, the expedition was abandoned, and Pauline brought the general's body back to France. When he was buried she, still recovering from her fever, had him interred in a costly coffin and paid him the tribute of cutting off her beautiful hair and burying it with him.

"What a touching tribute to her dead husband!" said some one to Napoleon.

The emperor smiled cynically as he remarked:

"H'm! Of course she knows that her hair is bound to fall out after her fever, and that it will come in longer and thicker for being cropped."

Napoleon, in fact, though he loved Pauline better than his other sisters--or perhaps because he loved her better--was very strict with her. He obliged her to wear mourning, and to observe some of the proprieties; but it was hard to keep her within bounds.

Presently it became noised about that Prince Camillo Borghese was exceedingly intimate with her. The prince was an excellent specimen of the fashionable Italian. He was immensely rich. His palace at Rome was crammed with pictures, statues, and every sort of artistic treasure. He was the owner, moreover, of the famous Borghese jewels, the finest collection of diamonds in the world.

Napoleon rather sternly insisted upon her marrying Borghese. Fortunately, the prince was very willing to be connected with Napoleon; while Pauline was delighted at the idea of having diamonds that would eclipse all the gems which Josephine possessed; for, like all of the Bonapartes, she detested her brother's wife. So she would be married and show her diamonds to Josephine. It was a bit of feminine malice which she could not resist.

The marriage took place very quietly at Joseph Bonaparte's house, because of the absence of Napoleon; but the newly made princess was

invited to visit Josephine at the palace of Saint-Cloud. Here was to be the triumph of her life. She spent many days in planning a toilet that should be absolutely crushing to Josephine. Whatever she wore must be a background for the famous diamonds. Finally she decided on green velvet.

When the day came Pauline stood before a mirror and gazed at herself with diamonds glistening in her hair, shimmering around her neck, and fastened so thickly on her green velvet gown as to remind one of a moving jewel-casket. She actually shed tears for joy. Then she entered her carriage and drove out to Saint-Cloud.

But the Creole Josephine, though no longer young, was a woman of great subtlety as well as charm. Stories had been told to her of the green velvet, and therefore she had her drawing-room redecorated in the most uncompromising blue. It killed the green velvet completely. As for the diamonds, she met that maneuver by wearing not a single gem of any kind. Her dress was an Indian muslin with a broad hem of gold.

Her exquisite simplicity, coupled with her dignity of bearing, made the Princess Pauline, with her shower of diamonds, and her green velvet displayed against the blue, seem absolutely vulgar. Josephine was most generous in her admiration of the Borghese gems, and she kissed Pauline on parting. The victory was hers.

There is another story of a defeat which Pauline met from another lady, one Mme. de Coutades. This was at a magnificent ball given to the most fashionable world of Paris. Pauline decided upon going, and intended, in her own phrase, to blot out every woman there. She kept the secret of her toilet absolutely, and she entered the ballroom at the psychological moment, when all the guests had just assembled.

She appeared; and at sight of her the music stopped, silence fell upon the assemblage, and a sort of quiver went through every one. Her costume was of the finest muslin bordered with golden palm-leaves. Four bands, spotted like a leopard's skin, were wound about her head, while these in turn were supported by little clusters of golden grapes. She had copied the head-dress of a Bacchante in the Louvre. All over her person were cameos, and just beneath her breasts she wore a golden band held in place by an engraved gem. Her beautiful wrists, arms, and hands were bare. She had, in fact, blotted out her rivals.

Nevertheless, Mme. de Coutades took her revenge. She went up to Pauline, who was lying on a divan to set off her loveliness, and began gazing at the princess through a double eye-glass. Pauline felt flattered for a moment, and then became uneasy. The lady who was looking at her said to a companion, in a tone of compassion:

"What a pity! She really would be lovely if it weren't for THAT!"

"For what?" returned her escort.

"Why, are you blind? It's so remarkable that you SURELY must see it."

Pauline was beginning to lose her self-composure. She flushed and looked wildly about, wondering what was meant. Then she heard Mme. Coutades say:

"Why, her ears. If I had such ears as those I would cut them off!"

Pauline gave one great gasp and fainted dead away. As a matter of fact, her ears were not so bad. They were simply very flat and colorless, forming a contrast with the rosy tints of her face. But from that moment no one could see anything but these ears; and thereafter the princess wore her hair low enough to cover them.

This may be seen in the statue of her by Canova. It was considered a very daring thing for her to pose for him in the nude, for only a bit of drapery is thrown over her lower limbs. Yet it is true that this statue is absolutely classical in its conception and execution, and its interest is heightened by the fact that its model was what she afterward styled herself, with true Napoleonic pride--"a sister of Bonaparte."

Pauline detested Josephine and was pleased when Napoleon divorced her; but she also disliked the Austrian archduchess, Marie Louise, who was Josephine's successor. On one occasion, at a great court function, she got behind the empress and ran out her tongue at her, in full view of all the nobles and distinguished persons present. Napoleon's eagle eye flashed upon Pauline and blazed like fire upon ice. She actually took to her heels, rushed out of the ball, and never visited the court again.

It would require much time to tell of her other eccentricities, of her intrigues, which were innumerable, of her quarrel with her husband, and of the minor breaches of decorum with which she startled Paris. One of these was her choice of a huge negro to bathe her every morning. When some one ventured to protest, she answered, naively:

"What! Do you call that thing a MAN?"

And she compromised by compelling her black servitor to go out and marry some one at once, so that he might continue his ministrations with propriety!

To her Napoleon showed himself far more severe than with either Caroline or Elise. He gave her a marriage dowry of half a million francs when she became the Princess Borghese, but after that he was continually checking her extravagances. Yet in 1814, when the downfall came and Napoleon was sent into exile at Elba, Pauline was the only one of all his relatives to visit him and spend her time with him. His wife fell away and went

back to her Austrian relatives. Of all the Bonapartes only Pauline and Mme. Mere remained faithful to the emperor.

Even then Napoleon refused to pay a bill of hers for sixty-two francs, while he allowed her only two hundred and forty francs for the maintenance of her horses. But she, with a generosity of which one would have thought her quite incapable, gave to her brother a great part of her fortune. When he escaped from Elba and began the campaign of 1815 she presented him with all the Borghese diamonds. In fact, he had them with him in his carriage at Waterloo, where they were captured by the English. Contrast this with the meanness and ingratitude of her sisters and her brothers, and one may well believe that she was sincerely proud of what it meant to be la soeur de Bonaparte.

When he was sent to St. Helena she was ill in bed and could not accompany him. Nevertheless, she tried to sell all her trinkets, of which she was so proud, in order that she might give him help. When he died she received the news with bitter tears "on hearing all the particulars of that long agony."

As for herself, she did not long survive. At the age of forty-four her last moments came. Knowing that she was to die, she sent for Prince Borghese and sought a reconciliation. But, after all, she died as she had lived--"the queen of trinkets" (la reine des colifichets). She asked the servant to bring a mirror. She gazed into it with her dying eyes; and then, as she sank back, it was with a smile of deep content.

"I am not afraid to die," she said. "I am still beautiful!"

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THE BEE.

The Project Gutenberg EBook of *Story of the Bible Animals*, by J. G. Wood

The Honey Bee of Palestine--Abundance of Bees in the Holy Land--Habitations of the wild Bee--The honey of Scripture--Domesticated Bees and their hives--Stores of wild honey--The story of Jonathan--The Crusaders and the honey.

Fortunately, there is no doubt about the rendering of the Hebrew word _debôrah,_ which has always been acknowledged to be rightly translated as "Bee."

The Honey Bee is exceedingly plentiful in Palestine, and in some

parts of the country multiplying to such an extent that the precipitous ravines in which it takes up its residence are almost impassable by human beings, so jealous are the Bees of their domains. Although the Bee is not exactly the same species as that of our own country, being the Banded Bee _(Apis fasciata),_ and not the _Apis mellifica,_ the two insects very much resemble each other in shape, colour, and habits. Both of them share the instinctive dislike of strangers and jealousy of intrusion, and the Banded Bee of Palestine has as great an objection to intrusion as its congener in this country.

Several allusions are made in the Scriptures to this trait in the character of the Bee. See, for example, Deut. i. 44: "And the Amorites, which dwelt in that mountain, came out against you, and chased you, as bees do, and destroyed you in Seir, even unto Hormah." All those who have had the misfortune to offend Bees will recognise the truth of this metaphor, the Amorites swarming out of the mountain like wild Bees out of the rocky clefts which serve them as hives, and chasing the intruder fairly out of their domains.

[Illustration: THE BEE]

A similar metaphor is employed in the Psalms: "They compassed me about; yea, they compassed me about; but in the name of the Lord I will destroy them.

"They compassed me about like bees, they are quick as the fire of thorns, but in the name of the Lord I will destroy them."

The custom of swarming is mentioned in one of the earlier books of Scripture. The reader will remember that, after Samson had killed the lion which met him on the way, he left the carcase alone. The various carnivorous beasts and birds at once discover such a banquet, and in a very short time the body of a dead animal is reduced to a hollow skeleton, partially or entirely covered with skin, the rays of the sun drying and hardening the skin until it is like horn.

In exceptionally hot weather, the same result occurs even in this country. Some years before this account was written there was a very hot and dry summer, and a great mortality took place among the sheep. So many indeed died that at last their owners merely flayed them, and left their bodies to perish. One of the dead sheep had been thrown into a rather thick copse, and had fallen in a spot where it was sheltered from the wind, and yet exposed to the fierce heat of the summer's sun. The consequence was that in a few days it was reduced to a mere shell. The heat hardened and dried the external layer of flesh so that not even the carnivorous beetles could penetrate it, while the whole of the interior dissolved into

a semi-putrescent state, and was rapidly devoured by myriads of blue-bottles and other larvæ.

It was so thoroughly dried that scarcely any evil odour clung to it, and as soon as I came across it the story of Samson received a simple elucidation. In the hotter Eastern lands, the whole process would have been more rapid and more complete, and the skeleton of the lion, with the hard and horny skin strained over it, would afford exactly the habitation of which a wandering swarm of Bees would take advantage. At the present day swarms of wild Bees often make their habitations within the desiccated bodies of dead camels that have perished on the way.

As to the expression "hissing" for the Bee, the reader must bear in mind that a sharp, short hiss is the ordinary call in Palestine, when one person desires to attract the attention of another. A similar sound, which may perhaps be expressed by the letters _tst_, prevails on the Continent at the present day. Signor Pierotti remarks that the inhabitants of Palestine are even now accustomed to summon Bees by a sort of hissing sound.

Whether the honey spoken of in the Scriptures was obtained from wild or domesticated Bees is not very certain, but, as the manners of the East are much the same now as they were three thousand years ago, it is probable that Bees were kept then as they are now. The hives are not in the least like ours, but are cylindrical vases of coarse earthenware, laid horizontally, much like the bark hives employed in many parts of Southern Africa.

In some places the hives are actually built into the walls of the houses, the closed end of the cylinder projecting into the interior, while an entrance is made for the Bees in the other end, so that the insects have no business in the house. When the inhabitants wish to take the honey, they resort to the operation which is technically termed "driving" by bee-masters.

They gently tap the end within the house, and continue the tapping until the Bees, annoyed by the sound, have left the hive. They then take out the circular door that closes the end of the hive, remove as much comb as they want, carefully put back those portions which contain grubs and bee-bread, and replace the door, when the Bees soon return and fill up the gaps in the combs. As to the wasteful, cruel, and foolish custom of "burning" the Bees, the Orientals never think of practising it.

In many places the culture of Bees is carried out to a very great extent, numbers of the earthenware cylinders being piled on one another, and a quantity of mud thrown over them in order to defend them from the rays of the sun, which would soon melt the wax of the

combs.

In consequence of the geographical characteristics of the Holy Land, which supplies not only convenient receptacles for the Bees in the rocks, but abundance of thyme and similar plants, vast stores of bee-comb are to be found in the cliffs, and form no small part of the wealth of the people.

The abundance of wild honey is shown by the memorable events recorded in 1 Sam. xiv. Saul had prohibited all the people from eating until the evening. Jonathan, who had not heard the prohibition, was faint and weary, and, seeing honey dripping on the ground from the abundance and weight of the comb, he took it up on the end of his staff, and ate sufficient to restore his strength.

Thus, if we refer again to the history of John the Baptist and his food, we shall find that he was in no danger of starving for want of nourishment, the Bees breeding abundantly in the desert places he frequented, and affording him a plentiful supply of the very material which was needed to correct the deficiencies of the dried locusts which he used instead of bread.

The expression "a land flowing with milk and honey" has become proverbial as a metaphor expressive of plenty. Those to whom the words were spoken understood it as something more than a metaphor. In the work to which reference has already been made Signor Pierotti writes as follows:--"Let us now see how far the land could be said to flow with milk and honey during the latter part of its history and at the present day.

"We find that honey was abundant in the time of the Crusades, for the English, who followed Edward I. to Palestine, died in great numbers from the excessive heat, and from eating too much fruit and honey.

"At the present day, after traversing the country in every direction, I am able to affirm that in the south-east and north-east, where the ancient customs of the patriarchs are most fully preserved, and the effects of civilization have been felt least, milk and honey may still be said to flow, as they form a portion of every meal, and may even be more abundant than water, which fails occasionally in the heat of summer.... I have often eaten of the comb, which I found very good and of delicious fragrance."

* * * * *

The Bee represented in the illustration is the common Bee of Palestine, _Apis fasciata_. The lowest figure in the corner, with

a long body and shut wings, is the queen. The central figure represents the drone, conspicuous by means of his large eyes, that almost join each other at the top of the head, and for his thicker and stouter body, while the third figure represents the worker Bee. Near them is shown the entrance to one of the natural hives which are so plentiful in the Holy Land, and are made in the "clefts of the rocks." A number of Bees are shown issuing from the hole.

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BACTERIA IN THE AIR

The Project Gutenberg EBook of *Bacteria*, by George Newman

METHODS OF EXAMINING AIR FOR BACTERIA

The basis of the usual methods in practice is to pass air over or through some nutrient medium. By this means the contained organisms are waylaid, and finding themselves under favourable conditions of pabulum, temperature, and moisture, commence active growth, and thus reveal themselves in characteristic colonies. These are examined, as directed on page 43, by the microscope and sub-culture. Quantitative estimation is not generally made, as a fixed standard is even less a possibility than in milk and soil. Returns of the number of bacteria in the sample taken may be made for the sake of information, but little or no conclusion of value can be drawn from such data. The standard recognised in Europe is the cubic metre, and one may speak, for example, of the air of a room containing 500, 1000, or 3000 germs per cubic metre.

The following are the chief methods:

1. _Pouchet's Aëroscope._ This apparatus was in use some time ago in France, and by its means all the solid matter of a given quantity of air was drawn through an air-tight glass tube by aspiration and made to impinge upon a small plate of glycerine. The air escaped to the aspirator at the sides, leaving upon the glycerine plate only its particulate matter. This remnant could then be examined.

2. _Koch_ adopted the simplest of all the culture methods, viz., exposing a plate of gelatine or agar for a longer or shorter time to the air of which examination is desired. By gravity the suspended bacteria fall on the plate and start growth. As a matter of quantitative exactitude, this method is not to be recommended, but it frequently proves an excellent method for qualitative estimation.

3. _The Method of Miquel._ Pasteur was the first to analyse air by the

culture method, and he adopted a plan which in principle is _washing_ the air in some fluid culture medium which will retain all the particulate matter, which may then be cultured directly or sub-cultured into any favourable medium.

[Illustration: MIQUEL'S FLASK]

Miquel has contrived a simple piece of apparatus for the carrying out of this principle. It consists of a flask with a central tube through its own neck for the entrance of the air. On one side of the flask is a tube to be connected with the aspirator, on the other side of the flask a tube through which to pour off the contained fluid at the end of the process. In the flask are placed 30 cc. of sterilised water (or, indeed, if it be preferred, sterilised broth). The entrance tube is now unplugged, and the aspirator draws through a fair sample of the air in the room (say ten litres). This air perforce passes through the water and by the exit tube to the aspirator, and is thereby washed, leaving behind in the water all its bacteria. The aspiration is then stopped, and the entrance tube closed. The water (plus bacteria) is now poured out into test-tubes of media or plated out on Petri's dishes. Provided the apparatus has been absolutely sterilised, and that the water was also sterile, any colonies developing upon the Petri dish are composed of micro-organisms from the air examined.

4. _The Method of Hesse._ This method is somewhat akin to Pouchet's aëroscope, but is in addition a culture method. Hesse's tube is about 2 feet long and 1-1/2 inches bore throughout. At one end is an india-rubber stopper bored for a glass tube to the aspirator. The other end is open. Before using, the tube is sterilised, and 40 or 50 cc. of sterilised gelatine replaced in it. The tube is now rapidly rotated in a groove on a block of ice or under a cold-water tap, and by this simple means the gelatine becomes fixed and forms a layer inside the tube throughout. We have therefore, so to speak, a tube of glass with a tube of gelatine inside it. The apparatus is now ready for use. It is fixed on the tripod, and fifteen litres of air are drawn through, and the tube is properly plugged and incubated at room temperature. In a day or two days the colonies appear upon the gelatine. They are most numerous generally in the first part of the tube, and might be roughly estimated as follows:

15 litres of air, 6 colonies.
⁂ 6/15 × 10,000 = 4000 aërobic bacteria in the cubic metre.

The disadvantages of this process are that dried gelatine does not catch germs like the broth cultures of Pasteur or Miquel, and that many organisms are able to go straight through the tube, and failing to be deposited, pass out at the aspirator exit, and thus are neither caught nor counted. The Hesse tube is generally used in practice with a pump consisting of two flasks and a double-way india-rubber tube. The flasks

have a capacity for one litre of water. By a simple adaptation it is possible to secure siphon action, and hence measure with considerable exactitude the amount of air passing through the tube.

5. _Methods of Filtration._ To-day most of the above methods have been discarded, with the exception, perhaps, of Miquel's and modifications thereof.

[Illustration: SEDGWICK'S SUGAR-TUBE]

Frankland, Petri, Pasteur, Sedgwick, and others have suggested the adoption of methods of filtration. These depend upon catching the organisms contained in the air by filtering them through sterilised sand or sugar, and then examining these media in the ordinary way. Many different kinds of apparatus have been invented. Petri aspirates through a glass tube containing sterilised sand, which after use is distributed in Petri dishes and covered with gelatine. The principal objection to this method is the presence of the opaque particles of sand in and under the gelatine. Probably it was this which suggested the use of soluble filters like sugar. Pasteur introduced the principle, and Frankland and others have followed it out. The apparatus most largely used is that known as Sedgwick's Tube. This consists of a comparatively small glass tube, about a foot long. Half of it has a bore of 2.5 cm., and the other half a bore of .5 cm. It is sterilised at 150° C., after which the dry, finely granulated cane-sugar is inserted in such a way as to occupy an inch or more of the narrow part of the tube next the wide part. Next to it is placed a wool plug, and the whole is again sterilised at 130° C. for two hours, care being taken that the sugar does not melt. After sterilisation an india-rubber tube is fixed to the end of the narrow portion, and thus it is attached to the aspirator. The measured quantity (5-20 litres) of air is drawn through, and any particulate matter is caught in the sugar. Warm, nutrient gelatine (10-15 cc.) is now poured into the broad end of the tube, and by means of a sterilised stilette the sugar is pushed down into the gelatine, where it quickly dissolves. We have now in the gelatine all the micro-organisms in the air which has been drawn through the tube. After plugging with wool at both ends, the tube is _rolled_ on ice or under a cold-water tap in order to fix the gelatine all round the inner wall of the tube, which is incubated at room temperature. In a day or two the colonies appear, and may be examined.

[Illustration: SEDGWICK'S TUBE

Fixed upon Tripod for Air Examination]

Micro-organisms in the Air. Schwann was one of the first to point out that when a decoction of meat is effectually screened from the air, or supplied solely with calcined air, putrefaction does not set in. Helmholtz and Pasteur confirmed this, but it may be said with some

truth that Schwann originated the germ theory, and Lister applied it in the treatment of wounds. Lister believed that if he could surround wounds with filtered air the results would be as good as if they were shut off from the air altogether.

It was Tyndall[21] who first laid down the general principles upon which our knowledge of organisms in the air is based. That the dust in the air was mainly organic matter, living or dead, was a comparatively new truth; that epidemic disease was not due to "bad air" and "foul drains," but to germs conveyed in the air, was a prophecy as daring as it was correct. From these and other like investigations it came to be recognised that putrefaction begins as soon as bacteria gain an entrance to the putrefiable substance, that it progresses in direct proportion to the multiplication of bacteria, and that it is retarded when they diminish or lose vitality.

Tyndall made it clear that both as regards quantity and quality of micro-organisms in the air there neither is nor can be any uniformity. They may be conducted on particles of dust--"the raft theory"--but being themselves endowed with a power of flotation commensurate with their extreme smallness and the specific lightness of their composition, dust as a vehicle is not really requisite. Nevertheless the estimation of the amount of dust present in a sample of air is a very good index of danger. It is to Dr. Aitken that we are indebted for devising a method by which we can measure dust particles in the air, even though they be invisible. His ingenious experiments, reported in the _Transactions of the Royal Society of Edinburgh_ (vol. xxxv.), have demonstrated that by supersaturation of air the invisible dust particles may become visible. As is now well known, Dr. Aitken has been able to prove that fogs, mists, and the like do not occur in dust-free air, and are due to condensation of moisture upon dust particles. But it should be remembered that, though dust forms a vehicle for bacteria, dusty air is often comparatively free from bacteria. Hence, after all, the necessary conditions for dissemination of bacteria in air are two, namely, some degree of air-current and dry surfaces.

This latter condition is one of essential importance. Bacteria cannot leave a moist surface either under evaporation or by means of air-currents.[22] Only when there is considerable molecular disturbance, such as splashing, can there possibly be microbes transmitted to the surrounding air. This fact, coupled with the influence of gravitation, is the reason why sewer gas and all air contained within moist perimeters is almost germ-free; whereas from dry surfaces the least air-current is able to raise countless numbers of organisms. Quite recently this principle has been admirably illustrated in two series of investigations made upon expired and inspired air. In a report to the Smithsonian Institution of Washington (1895) upon the composition of expired air, it is concluded that "in ordinary quiet respiration no bacteria, epithelial scabs, or particles of dead tissue

are contained in the expired air. In the act of coughing or sneezing such organisms or particles may probably be thrown out." The interior of the cavity of the mouth and external respiratory tract is a moist perimeter, from the walls of which no organisms can rise except under molecular disturbance. The position is precisely analogous to the germ-free sewer air as established by Messrs. Laws and Andrewes for the London County Council. The popular idea that infection can be "given off by the breath" is contrary to the laws of organismal pollution of air. The required conditions are not fulfilled, and such breath infection must be of extremely rare occurrence. The air can only be infective when filled with organisms arising from dried surfaces.

The other series of investigations were conducted by Drs. Hewlett and St. Clair Thompson, and dealt with the fate of micro-organisms in inspired air and micro-organisms in the healthy nose. They estimated that from 1500 to 14,000 bacteria were inspired every hour. Yet, as we have pointed out, expired air contains practically none at all. It is clear, then, that the inspired bacteria are detained somewhere. Lister has pointed out, from observation on a pneumo-thorax caused by a wound of the lung by a fractured rib, that bacteria are arrested before they reach the air-cells of the lung; hence it is at some intermediate stage that they are detained. Hewlett and Thomson examined the mucus from the wall of the trachea, and found it germ-free. It was only when they reached the mucous membrane and moist vestibules and vibrissæ of the nose that they found bacteria. Here they were present in abundance. The ciliated epithelium, the moist mucus, and the bactericidal influence of the wandering or "phagocyte" cells probably all contribute to their final removal.[23]

There can be no doubt that the large number of bacteria present in the moist surfaces of the mouth is the cause of a variety of ailments, and under certain conditions of ill-health organisms may through this channel infect the whole body. _Dental caries_ will occur to everyone's mind as a disease possibly due to bacteria. As a matter of fact, probably acids (due to acid secretion and acid fermentation) and micro-organisms are two of the chief causes of decay of teeth. Defects in the enamel, inherent or due to injury, retention of débris on and around the teeth, and certain pathological conditions of the secretion of the mouth are predisposing causes, which afford a suitable nidus for putrefactive bacteria. The large quantity of bacteria which a decayed tooth contains is easily demonstrated.

From the two series of experiments which we have now considered we may gather the following facts:

(_a_) That air may contain great numbers of bacteria which may be readily inspired.

(_b_) That _in health_ those inspired do not pass beyond the moist

surface of the nasal and buccal cavities.

(_c_) That here there are various influences of a bactericidal nature at work in defence of the individual.

(_d_) That expired air contains, as a rule, no bacteria whatever.

The practical application of these things is a simple one. To keep air free from bacteria, the surroundings must be moist. Strong acids and disinfectants are not required. Moisture alone will be effectual. Two or three examples at once occur to the mind.

Anthrax spores are conveyed from time to time from dried infected hides and skins to the hands or bodies of workers in warehouses in Bradford and other places. If the surroundings were moist, and the hides moist, anthrax spores and all other bacteria would not remain free in the air.

The bacilli or spores of _tubercle_ present in sputum in great abundance cannot, by any chance whatever, infect the air until, and unless, the sputum dries. So long as the expectorated matter remains on the pavement or handkerchief _wet_, the surrounding air will contain no bacilli of tubercle. But when in the course of time the sputum dries, then the least current of air will at once infect itself with the dried spores and bacilli.

Typhoid Fever, too, occupies the same position. Only when the excrement dries can the contained bacteria infect the air. It is of course well known that the common channel of infection in typhoid fever is not the air, whereas the reverse holds true of tuberculosis. The writer recently obtained some virulent typhoid excrement, and placed it in a shallow glass vessel under a bell-jar, with similar vessels of sterilised milk and of water, all at blood-heat. So long as the excrement remained moist, even though it soon lost its more or less fluid consistence, the milk and water remained uninfected. But when the excrement was completely dried it required but a few hours to reveal typhoid bacilli in the more absorptive fluid, milk, and at a later stage the water also showed clear signs of pollution. This evidence points in the same direction as that which has gone before. If the excrement of patients suffering from typhoid dries, the air will become infected; if, on the other hand, it passes in a moist state into the sewer, even though untreated with disinfectants, all will be well as regards the surrounding air.

Before passing on to consider other matters concerning organisms in the air, we may draw attention to some interesting observations recorded by Mr. S. G. Shattock[24] on the negative action of sewer air in raising the toxicity of lowly virulent bacilli of diphtheria. Some direct relationship, it has been surmised, exists between breathing

sewer air and "catching" diphtheria. Clearly it cannot be that the sewer air contains the bacillus. But some have supposed that the sewer air has had a detrimental effect by increasing the virulent properties of bacilli already in the human tissues. Two cultivations of lowly virulent bacilli were therefore grown by Mr. Shattock in flasks upon a favourable medium over which was drawn sewer air. This was continued for two weeks or five weeks respectively. Yet no increased virulence was secured. Such experiments require ample confirmation, but even from this it will be seen that sewer air does not necessarily have a favouring influence upon the virulence of the bacilli of diphtheria.

It should be noted that the bacilli of diphtheria are capable of lengthened survival outside the body, and are readily disseminated by very feeble air-currents. The condition necessary for their existence outside the body for any period above two or three days is moisture. Dried diphtheria bacilli soon lose their vitality. It is probably owing to this fact that the disease is not as commonly conveyed by air as, for example, tubercle.[25]

The influence of gravity upon bacteria in the air may be observed in various ways, in addition to its action within a limited area like a sewer or a room. Miquel found in some investigations in Paris that, whereas on the Rue de Rivoli 750 germs were present in a cubic metre, yet at the summit of the Pantheon only 28 were found in the same quantity of air. At the tops of mountains air is germ-free, and bacteria increase in proportion to descent. As Tyndall has pointed out, even ultra-microscopic cells obey the law of gravitation. This is equally true in the limited areas of a laboratory or warehouse and in the open air.

The conditions which affect the number of bacteria in the air are various. After a fall of rain or snow they are very markedly diminished; during a dry wind they are increased. In open fields, free from habitations, they are fewer, as would be expected, than in the vicinity of manufactories, houses, or towns. A dry, sandy soil or a dry surface of any kind will obviously favour the presence of organisms in the air. Frankland found that fewer germs were present in the air in winter than in summer, and that when the earth was covered with snow the number was greatly reduced. Miquel and Freudenreich have declared that the number of atmospheric bacteria is greater in the morning and evening between the hours of six and eight than during the rest of the day. But we venture to express the hope that such coincidental facts may not be exalted into principles.

There is no numerical standard for bacteria in the air as there is in water. The open air possibly averages about 250 per cubic metre. On the seacoast this number would fall to less than half; in houses and towns it would rise according to circumstances, and frequently in dry weather reach thousands per cubic metre. When it is remembered _that

air possesses no pabulum_ for bacteria as do water and milk, it will be understood that bacteria do not live in the air. They are only driven by air-currents from one dry surface to another. Hence the quality and quantity of air organisms depend entirely upon environment and physical conditions. In some researches which the writer made into the air of workshops in Soho in 1896, it was instructive to observe that fewer bacteria were isolated by Sedgwick's sugar-tube in premises which appeared to the naked eye polluted in a large degree than in other premises apparently less contaminated. In the workroom of a certain skin-curer the air was densely impregnated with particles from the skin, yet scarcely a single bacterium was isolated. In the polishing-room of a well-known hat firm, in which the air appeared to the naked eye to be pure, and in which there was ample ventilation, there were found four or five species of saprophytic bacteria. Quite recently Mr. S. R. Trotman, public analyst for the city of Nottingham, estimated the bacterial quality of the air of the streets of that town during "the goose fair" held in the autumn. He used a modification of Hesse's apparatus in which the gelatine is replaced by glycerine. The air was slowly drawn through and measured in the usual way. Sterilised water was then added to bring the glycerine to a known volume, the liquid thoroughly mixed, and a series of gelatine and agar plates made with quantities varying from 0.1 to 2 cc. By this method a large number of bacteria were detected in this particular investigation, including _Staphylococcus pyogenes aureus et albus_, the common _Bacillus subtilis_, and _B. coli communis_.[26]

During a six years' investigation the air of the Montsouris Park yielded, according to Miquel, an average of 455 bacteria per cubic metre. In the middle of Paris the average per cubic metre was nearly 4000. Flügge accepts 100 bacteria per cubic metre as a fair average. From this fact he estimates that "a man during a lifetime of seventy years inspires about 25,000,000 bacteria, the same number contained in a quarter of a litre of fresh milk."[27] Many authorities would place the average much below 100 per cubic metre, but even if we accept that figure it is at once clear how relatively small it is. This is due, as we have mentioned, to sunlight, rain, desiccation, dilution of air, moist surfaces, etc. So essentially does the bacterial content of air depend upon the facility with which certain bacteria withstand drying that Dr. Eduardo Germano[28] has addressed himself first to drying various pathogenic species and then to mixing the dried residue with sterilised dust and observing to what degree the air becomes infected. Typhoid appears to withstand comparatively little dessication, without losing its virulence. Nevertheless, it is able to retain vitality in a semi-dried condition, and it is owing to this circumstance in all probability that it possesses such power of infection. Diphtheria, on the other hand, is, as we have pointed out, capable of lengthened survival outside the body, particularly when surrounded with dust. The question of their power of resisting long drying is an unsettled point. The power of surviving a drying process is, according to Germano,

possessed by the streptococcus. This is not the case with cholera or plague. Dr. Germano classifies bacteria, as a result of his researches, into three groups: first, those like plague, typhoid, and cholera, which cannot survive drying for more than a few hours; second, those like the bacilli of diphtheria, and streptococci, which can withstand it for a longer period; thirdly, those like tubercle, which can very readily resist drying for months and yet retain their virulence. It will be obvious that from these data it is inferred that Groups 1 and 2 are rarely conveyed by the air, whereas Group 3 is frequently so conveyed. Miquel has recently demonstrated that soil bacteria or their spores can remain alive in hermetically sealed tubes for as long a time as sixteen years. Even at the end of that period the soil inoculated into a guinea-pig produced tetanus.[29]

The presence of pathogenic bacteria in the air is, of course, a much rarer contamination than the ordinary saprophytes. Tubercle has been not infrequently isolated from dry dust in consumption hospitals, and in exit ventilating shafts at Brompton the bacillus has been found. From dried sputum it has, of course, been many times isolated, even after months of desiccation. M. Lalesque failed to isolate it from the dry soil surrounding some garden seats in a locality frequented by phthisical patients. The writer also failed to isolate it from the same soil. But a very large mass of experimental evidence attests the fact that the air in proximity to dried tubercular sputum or discharges may contain the specific bacillus of the disease. Diphtheria in the same way, but in a lesser degree, may be isolated from the air, and from the nasal mucous membrane of nurses, attendants, and patients in a ward set apart for the treatment of the disease. Delalivesse, examining the air of wards at Lille, found that the contained bacteria varied more or less directly with the amount of floating matter, and depended also upon the vibration set up by persons passing through the ward and the heavy traffic in granite-paved streets adjoining. _Bacillus coli_, staphylococci, and streptococci, as well as _B. tuberculosis_, were isolated by this observer.

Some new light has been thrown upon the subject of pathogenic organisms in air by Neisser in his investigations concerning the amount and rate of air-currents necessary to convey certain species through the atmosphere. He states that the bacteria causing diphtheria, typhoid fever, plague, cholera, and pneumonia, and possibly the common _Streptococcus pyogenes_, are incapable of being carried by the molecules of atmospheric dust which the ordinary insensible currents of air can support, whilst _Bacillus anthracis_, _B. pyocyaneus_, and the bacillus of tubercle are capable of being aërially conveyed. This work will require further confirmation, but if its truth be established, it proves that attempted aërial disinfection of the first group of diseases is useless.

PLANT BEHAVIOR

The Project Gutenberg EBook of *Botany*, by Norman Taylor

1. LIGHT AND ITS IMPORTANCE TO THE PLANT

Practically all that has been said in the first chapter relates to what plants are, their organs, or what we may call the architecture or plan of their framework. But what they do with this elaborate structure is as important as what we do with a house that may contain every modern improvement but is never a home until these things have been put to use. One of the chief concerns of any architect is to see to it that the house has as much sunshine by day and as attractive illumination by night as possible. Nature, that greatest of all architects, also sees to it that plants get the utmost necessary sunlight, but for a much more important reason than the mere attractiveness of sunshine, be that ever so beautiful. For light, the life-giver of all green things, is so absolutely essential to plants that experiments to grow them in the dark have always failed, and many gardeners now use electric light in greenhouses in order to prolong the short daylight of winter. It is the lack of light that makes celery blanch.

Plants grown in the house inevitably turn toward the windows, even plants growing against a wall turn their leaves away from it--nowhere can one find living green things that do not find the light as surely and persistently as men try to get their food or their mates. Many examples of this could be given and must have been noticed by everyone.

Sometimes seeds germinate under a barn floor for instance, and the puny pale little plantling reaches out slender stems, all of which turn, as a compass turns to the north, to perhaps a crack of light in one corner of the building. We have already seen how the search for light will carry the slender rattan palms of India hundreds of feet to the topmost leaves of the forest. Individual plants, and, as we shall see later, whole forests make desperate efforts to get to the light. We know already, that the struggle for light is just as bitter as the struggle for food by roots. And finally if, as we have many times proved by experiments, plants die when grown in a dark room, what is it that light does for plants and how is a process carried on that everything leads us to think is of the greatest possible importance? Quite obviously it is not the mere beauty of sunshine dancing upon the landscape, as entrancing a picture as that may be any summer afternoon, with the play of sunshine and shadow on the tracery of foliage. That green color of the foliage, the almost universal green of so much of the earth’s vegetation, restful

to tired eyes, providing us with the most pleasant shade, has wrapped up within it the secret of just what sunshine does for plants. For under the magic of light acting upon this greenery one of the most important industries in the world, the manufacture of food, is constantly going on.

LEAVES AS FACTORIES FOR THE MAKING OF FOOD

It must be clear enough from the start that to call a leaf a factory for the making of food forces us to decide at once whether this is a mere way of speaking, or whether, incredible as it may seem, anything as thin as a leaf _can_ really produce food. As we eat lettuce, and millions of cattle graze every day, leaves as food producers win handily on that score. But to understand how food is produced in such a tiny factory demands that we walk about in it for a bit, study the inside of it and especially its many small chambers within which is not only the machinery, but some of the finished product stored up for later use.

Unlike modern factories there are many entrances, from any one of which we can begin our tour of inspection. On the under side of nearly all leaves and on the upper side of some there are scores or even hundreds of small pores called _stoma_, so small that only with a microscope can they be seen. These entrances through the factory wall, are carefully guarded by a pair of watchmen whose business it is to see neither too much dry air gets in nor too much of the product of the factory gets out. They see to it, also, that waste products are thrown out at the proper time. These watchmen, or _guard cells_, as they are called, are constantly on the job, work almost automatically, but their chief function is connected with the proper ventilation of the place, and will be discussed later under “How Plants Breathe.”

Once past the entrance it is obvious that we are in one of the strangest of all factories, for none of the rooms are truly square or oblong and their irregularity as to outline would drive your average foreman into profanity. Yet they are certainly divided into distinct classes, at least as to size and as to what the rooms contain. Some are apparently filled with nothing but air and have direct connection through the stoma with the outdoors. These are called _intercellular spaces_. Others, and these are most important, are filled mostly with the green coloring matter that gives the leaf its color. This substance is known as _chlorophyll_, its individual units as _chloroplasts_, or literally, chlorophyll bodies. Quite independently of these chlorophyll cells or rooms, or the intercellular spaces which correspond to halls, there are some large and many small tubes. These are the veins of the leaf and their finer branches and by their direct connection through the stem to the roots, serve as the ducts through which some of the raw materials are brought into the factory.

This green coloring matter or chlorophyll is perhaps the most important substance in nature. Without it all except a very few plants would die, and even in those beautifully colored leaves like coleus or caladium chlorophyll is always found, but in these colored leaves it is merely obscured by other coloring substances. It is in the chlorophyll that the ability resides to take the inorganic substances through the roots or from the air, and by the aid of sunlight transform them into organic substances like starch and sugar. Nothing else in all nature can do it; without this faculty, which the commonest green leaf possesses, the earth would prove uninhabitable within a single year. Just what chlorophyll is chemically is not yet thoroughly known, but the thing of chief interest is that it is hardly ever found in parts of the leaf not exposed directly to the sunlight, and that during the autumnal coloring and before the fall of the leaf chlorophyll is carried to other parts of the plant, and quite possibly stored for use the following season.

While the composition of chlorophyll is not surely known, iron is certainly one of its constituents, as plants deprived of iron lose their green color. It also is known to contain oxygen, carbon, hydrogen, and nitrogen, but merely to catalog what we know about its make-up does not tell us that it is a living green substance and that sunshine sets it in motion. Just exactly how light acts on chlorophyll no one really knows; we merely know that it does so act and that the result is one of the marvelous secret processes of nature, perhaps like the secret of life itself forever hidden from man. In our tiny factory, then, we have raw products coming from the roots and through the stoma from the air; machinery of the most efficient type, for chlorophyll works night and day, and constantly renews itself while producing the finished products; energy from the sun; and finally the complete manufactured products which are foods in the shape of starch and sugar. During the growing season there is no banking of the fires, no stoppage of this most important of all industries, no strikes or lockouts. Each part of the whole works smoothly and with the nicest precision--in fact so perfectly does this process keep on going, so complete is the orderliness of the place, and so regular are the completed products turned out, that no modern factory manager or workman but can learn something from a rather close study of this smallest but most efficient factory in the world.

Some of the raw products are delivered to the leaf from the roots where they have been absorbed by another process that will be considered a little later. These consist of water and the inorganic substances dissolved in it, popularly called sap. Carbon and oxygen come mostly from the air, sometimes separately, more often in the form of a combination called carbon dioxide which is one of the chief constituents of the gas thrown off by man as he breathes _out_. Now these inorganic substances, contained in the sap or derived from the air, are literally mixed by the chlorophyll and form, always with the aid of sunlight, substances known as _carbohydrates_, the commonest example of which is sugar. Some form of sugar is one of the earliest

results of this process, but sugar is quite easily dissolved in the sap which has contributed to its manufacture, and the excess sugar is thus removed. Otherwise it would clog the machinery and prevent the production of fresh supplies. This first step in the manufacturing process has not inaptly been called _photosynthesis_, the meaning of which _photos_, light, and _synthesis_, combining by means of, suggests in a word the necessity of light and the combination of the inorganic substances mentioned above. Of course this process of photosynthesis is not as simple as the brief account of it suggests, for it is actually a complicated chemical process only part of which is yet understood. It is fairly certain that it goes step by step; it is quite certain that the beginning is inorganic and the end organic compounds like sugar. Something is known also of the wear and tear on the chlorophyll, its waste products, and how it keeps itself not only fit but provides for its own constant renewal. One of the excess or by-products in this initial manufacture of sugar is oxygen. This is either used in other ways by the plant, or more generally it is thrown off through the stoma into the outer air. Oxygen, as one of the necessary constituents of the air that man breathes _in_, is thus thrown off, while, as we have seen, carbon dioxide, a poisonous gas which we breathe _out_, is a necessity for this manufacturing process in all green plants. Hardly any trick of nature so completely fulfills the wants of animal and plant life as this mutual exchange of by-products--in the case of animals it is the waste of respiration, in plants it is the wastage of sugar making and some other changes that go on in the plant just after this stage.

The amount of sugar made, carbon dioxide taken in, and oxygen given off by this process suggests that while leaves may be very tiny factories they are among the most efficient in the world. Assuming an area of leaf surface equal to about a square yard the amount of sugar made would be about one-third of an ounce in a day or nearly three pounds in a single growing season. Carbon dioxide withdrawn from the air would average from the same area of leaf surface about two gallons a day or over three hundred gallons for the season. As an equal amount of oxygen is given off by the leaf, it becomes clear that as all of this interchange must go through the stoma the functioning of these and their guardians must be nearly one hundred per cent perfect. As we shall see a little later, they perform still other duties with even greater perfection. When we stop to reflect what an absurdly minute fraction one square yard of leaf surface is to the total leaf surface in the world, we come to some realization of the gigantic proportions of this process of manufacturing sugar and exchange of gases mutually useful to animals and plants. While in the United States most of the leaves fall in the autumn, the great bulk of the vegetation of the world holds the greater part of its leaves all the year, notably in the vast evergreen forests in the north, and of course practically all tropical vegetation. Chlorophyll in such places works continually and what the total of sugar production may be no man can even guess.

Sugar, although the first step in the process, is not the final one, and the leaf has still other tasks to complete. Some of the sugar is used up in the process of renewing the chlorophyll, some of it is moved to other parts of the plant where in sugar cane it forms the world's chief sugar supply; but the remainder is transformed into starch, a substance that is not dissolved by the water of the sap, and is therefore capable of permanent storage either in the leaf itself or in other parts of the plant, notably in the tubers of the potato, the solid part of which is nearly all starch. The conversion of sugar to starch, which is really a means of contriving to properly store the product of the factory, is done by certain ferments known as enzymes. Just what enzymes are or even how they work is not well known, but apparently they have the faculty of converting certain substances like sugar, and in the process they neither use up nor materially change their own composition. It is certain that the conversion of sugar to starch is an elaborate chemical process, but it is accomplished by these enzymes, the very existence of which has only recently been discovered. Enzymes not only do this, but they convert starch which is insoluble into a kind that may be dissolved and thus carried to different parts of the plant. Upon this power depends the storage of starch in roots, tubers, seeds, or wherever else it is found in the plant, and it is of course upon this power man depends for the food supply of the world. Wheat or corn, potatoes, rice, all the foods that are rich in starch produce none in that part of the plant harvested by man. All of it has come by the process which is only sketched in its briefest outlines in the foregoing paragraphs. All of it must come from that green coloring matter of nearly all plants which, while mostly confined to leaves, is not always so. And wherever chlorophyll is found this process goes on even in the simplest plants. Because it is so overwhelmingly a characteristic of leaves and, as we have seen, leaves are the one organ of the plant upon which man pins his only hope of future food supply, the leaves of all plants may be truly likened to a factory the work of which is never ending, the product of which the leaf will never use, but the result of which has far-reaching consequences to us all.

EFFECT OF LIGHT AND DARKNESS ON INDIVIDUAL PLANTS AND VEGETATION AS A WHOLE

Now that we understand the importance of light to all except a very few plants, and its very close relationship to the green coloring matter of all leaves, many things about the arrangement and position of leaves, and indeed of the whole plant, may be understood, which, without this knowledge, seems the result of mere caprice or chance. It would seem as though the habit of plants growing toward the light, and against the pull of gravity, a character almost universal, no matter from what mountain declivity or rocky cliff it may spring, might be the result of the "pull" exerted by light on the green coloring matter in the leaves. While light does aid in plants having a generally erect habit it is not

the cause of it, as we have many times proved by experiments. As a seed sprouts and the roots go down into the earth, the shoot, before it has broken through the surface and while _still in the dark_, always grows upward. This property of growing in two opposite directions at the same time, the roots always with gravity and the shoot nearly always against it, is known as _geotropism_. In the case of vines or other trailing plants there is the same tendency exhibited, even though the plant is not erect. We must think of geotropism as a growth habit of all plants, not caused by light, for it has been shown to act in the dark, but of the greatest advantage to all plants in their initial start toward the light. If this were not the case, it may be imagined into what chaos the vegetable world would be thrown. We are so accustomed to roots going down and shoots going up that we are not apt to think of it as the result of two antagonistic growth habits, the true cause of which is not understood, the result of which is common knowledge. Geotropism is one of those mysteries with which the book of nature is crowded, and merely to describe it and realize its force is by no means to arrive at its true inwardness.

But, quite independently of this peculiar growth habit, the stems and often whole plants do show response to light and many times the response, in its effects, cannot be distinguished from geotropism. Perhaps the most homely illustration of this is the common house geranium which, no matter how often it is turned, always grows toward the window, and if not turned at all becomes hopelessly lopsided, with the leaves all bending sharply toward the light. Trees growing on a cliffside, while always growing upward, nearly always may be seen bending away from the cliff where light is scarce and toward the unobstructed light. The position of hundreds of twigs and branches on any tree have been dictated by their exposure to light, and the habit of practically all trees in the forest of being clear of branches for many feet from the ground is another illustration of the profound effect of light. In the latter case the taller the trees the farther from the ground are the first branches, and in the big trees of California the first branches are frequently over a hundred feet from the ground. In their young stages all these trees were furnished with branches, the leaves of which in their day performed their appointed tasks. But in the strife and hurry of the crowns of the forest to overreach their neighbors these lower branches, from the bottom upward, gradually die off. So inexorable is the plant's demand for light, that these lower branches, in spite of being nearest the source of their food from the roots, are doomed to be killed. Nature plays no favorites and these lower branches, once the pride and support of the young tree, are ruthlessly dropped off when they can no longer play the game. This wholesale slaughter of lower branches in a forest, more complete than any pruning by man could ever be, gives us, if the story of the factory leaf has not already done so, some conception of the part played by light in the plant world.

The shade of certain trees is so much denser than others that they have been planted for this purpose, notably the horse-chestnut and Norway maple. Foresters have long recognized this difference in trees and it would be strange if nature had not taken advantage of it also. If certain trees can still maintain themselves in the forest without producing a dense crowd of leaves, such as the silver maple for instance, they would have a decided advantage over a tree like the sugar maple which casts a much denser shade. A walk through any forest will show scores of examples of trees that live and produce seeds by virtue of the fact, not that they demand all available light, as their more vigorous neighbors do, but that by a compromise, by an almost diabolical cunning, their light demands, and of course their leaf exposure, have been cut down to a point where the tree can grow in a place impossible for trees that lack this ability. It is, of course, not a trick which any individual tree can perform at will. Rather is it a characteristic found in all individuals of certain kinds, where the comparative disadvantage of making less food and having less leaf exposure is more than overcome by the enormous advantage of being able to fight their way into a forest that would otherwise be impossible for them. We shall see, in the chapter on Plant Distribution, how this peculiar response to light has had effects of considerable significance upon forests, particularly after forest fires, lumbering, or other disturbance of the natural conditions. Trees in the forest, and the shrubs and herbs under them are not the quiet stately things about which the poets are so fond of singing. They are places, on the contrary, of intense warfare, and perhaps some of the greatest casualties occur in the battle for light.

Leaves, as being the most directly involved in the matter of utmost exposure to light, show the greatest amount of response to it, by their shape sometimes, by their position nearly always, and very often by the character of their leafstalks. In many herbs the first young leaves are relatively short-stalked, while as the plant grows upward the lower leaves are progressively longer stalked, which is a direct response to the fact that the upper leaves take their full share of light, leaving little or nothing for the lower ones. To avoid complete shading their leafstalks are often many times the length of their more fortunately placed neighbors above them. In those plants like the garden primrose or common weedy plantain, which bear all their leaves in a close cluster or rosette at the level of the ground, we see an almost fiendish cleverness in their earlier and later habits of growth. When the leaves first start, as they nearly always do among grasslike vegetation in which these plants usually have to fight for a chance of life, the leaves grow straight up, so that they may get above the level of the surrounding grass. Once there, and the precious light an assured fact, they gradually flatten out their leaves to form a rosette, of course cutting off the light from the grass about them and killing it just as certainly as though it were pulled up by the roots. Hundreds of different kinds of plants do this, apparently with the utmost cruelty to their inoffensive neighbors, with whom they start upon nearly equal terms in the race for

life. If they began at once to spread out their rosette while it was still in its small spring state, the upward pointing grasses would smother it, and as if in anticipation of this the leaves grow up with the grass, only to flatten out when the proper time comes for them to show their true colors.

Light not only affects leaves in their habits of growth but it actually causes movements in some leaves which are as regular as clockwork. The best known cases are those in the pea family and wood sorrels, all of which bear compound leaves. During the day these leaflets are spread out in the ordinary way and catch the light, but at sundown, as though this were a quite useless exertion for the night, they fold up and the leaf "goes to sleep." On cloudy days they partly fold up, as if in recognition of the fact that for their business of getting light it is an off day; but also if the sun comes out they hurriedly expand their leaflets. It is not yet certain whether these apparently intelligent movements of leaves in relation to light are of any real advantage to the plant as a whole or not. They are surely one of the most interesting things to watch and may be seen in locust trees and wood sorrel any night.

Just as we can have too much of a good thing, it is possible for plants to have too much direct sunlight. In open spaces, where the struggle for life centers not about the fight for light but over other matters, we find leaves actually protecting themselves against too much exposure, and by a variety of ingenious ways. The texture of the upper or lower side, the kind of hair growing on their surface, and the number and size of their pores, are the most usual ways of leaves arming themselves against an oversupply of the one thing that their neighbors in the cool forest fight to the death to obtain. There seems to be a fatality against which plants, like ourselves, are nearly helpless. Their attempts to overcome it, again like our own struggles against an apparently overmastering fate, develop those characteristics that insure survival to the fittest, death to the puny or unaccommodating.

We could hardly leave the subject of light and plants' relation to it without mentioning, perhaps, the most remarkable case of adaptation to peculiar light conditions. All those aquatic plants that grow beneath the surface of the water need and get much less light than ordinary land plants. But from the island of Madagascar comes the lace leaf or water yam, which grows in quiet pools that are mostly in the depths of the tropical forest. Add to the dense shade cast upon the gloomy surface of such ponds the amount of light naturally lost in its passage through the water, and we get some notion of the singularly secluded home of this aquatic plant. What, now, is nature's response to these peculiar conditions? How do the leaves of this well-shaded inhabitant of quiet pools behave? Their leaves are about a foot long and three or four inches wide, quite unnecessarily large for a submersed aquatic, but they consist _wholly of veins_. There is no "meat" to the leaf, none of that

soft, green tissue so familiar in ordinary leaves. The conditions under which it is doomed to live almost seem as if it recognized the futility of having a broad expanse of the usually constituted leaf blade to expose to a light which is not there. It is significant that this skeletonized condition is permanent, the leaf functions much as ordinary aquatic leaves do, but its network of quite naked veins almost seems a mute protest against its fate. The delicate, lacelike "foliage" of this aquatic adds a touch of beauty to one of the most curious plants in the world.

2. HOW PLANTS GET THEIR FOOD AND WATER FROM THE EARTH

If we could stretch an apparently impervious membrane, like the inner white skin just inside an eggshell, or a piece of parchment, and so form a wall through the middle of a glass box, and then pour into one of the compartments pure water and in the other a mixture of water and molasses, a very curious result would follow within a comparatively short period. We should find that presently there would be a gentle filtering of the water through the membrane toward the molasses water, and similar gentle current in the other direction. In other words, fluids of different density, if separated by a membrane, tend to equalize each other. This equalization may not be very rapid, and at first it will be more speedy from the less dense to the more dense, but eventually it will make the different fluids of a common density. This purely mechanical property of the equalization of fluids separated by a membrane is known as _osmosis_, and it is upon the possession of the equipment necessary for this that roots depend for getting food and water from the soil.

In our discussion of roots in Chapter I, we found that they end in very fine subdivisions, which are themselves split up into practically invisible root hairs. These root hairs are the only way that roots can absorb the food and water in the soil, and they are able to do this because they are provided with a membrane which permits osmosis to act between the solution inside the root hair and the water in the soil. The solution in the root hair is mostly a sugary liquid, some of that surplus sugar made in the leaves, and it is denser than the soil water, so there is apparently nothing to prevent an equalization of the liquids on different sides of the membrane. If this actually happened, as it would in the case of the simple experiment noted above, then roots would exchange a fairly rich sugary liquid for a much more watery one, and we should find that plants did not get their food from the soil, but really have it drained away from them by osmosis. But nature has a cunning device for stopping such robbery, which is prevented by the membranes of root hairs being only permeable to the extent of letting water _in_, not permeable enough to allow sugar to escape. As we have seen, osmosis is a purely mechanical process which, if left to operate without interference, would not aid but injure the plant. Surely, nothing with

which plants are provided is so important to them as this delicate membrane of the root hairs which, while allowing osmosis to act in a one-sided fashion, preserves to the plant the sugary liquid that alone makes the absorption of soil water possible.

As root hairs are very much alive and work constantly, they must be provided with air, without which no living thing can exist. And here, again, it seems as though nature, with almost uncanny foresight, had deliberately planned for this requirement of roots. And, in this case, not by interfering with a physical process by an adjustment of plant structure, but by the arrangement of soil particles and the way in which water is found in all soils. Soil particles, even in the most compact clay, do not fill _all_ the space occupied by the soil as a whole. There are tiny air spaces all through the soil, which insures a constant supply of fresh air. That is one reason why gardens are cultivated, to see to it that plenty of fresh air is allowed to permeate the soil. Around the finest soil particles there is always an almost incredibly thin film of water, which is renewed as soon as it is lost by its absorption by the root hairs or by evaporation. This renewal of the water film is itself a mechanical process, called capillarity, best illustrated by putting a few drops of water on a plate and placing on them a lump of sugar. The water will spread all through the lump of sugar in a few seconds and the capillarity that forces it up through the lump is the same as sees to it that the tiny film of water surrounding the finest soil particles is constantly renewed from the lower levels of the soil.

Little do we dream, as we walk over the commonest weed, that buried at its roots are these delicate arrangements for securing food and water. Osmosis allowed to act so that the “exchange” of liquids is all to the advantage of the plant, capillarity providing a constant water supply, and the very piling together of the soil so contrived that the life-giving air filters all through it--does it not seem as if all this were, if not a deliberate plan, certainly a more perfect one than mere man could have devised?

If you will turn back for a moment to the beginning of the description of how plants get their food, you will find that in osmosis the weaker liquid tends to permeate the denser one more rapidly than the denser one does the weaker. As we have just seen, the sugary liquid in the root hairs is denser than the soil water outside, and, furthermore, _none of it is allowed to escape_. This comparatively greedy process of taking everything and giving nothing results in a constant flow of soil water into the root hairs. When the flow of liquids in osmosis is not at once equalized, a gentle pressure is brought to bear to make them so. This is what is called _osmotic pressure_, and it is this pressure that forces the absorbed liquid through the roots and part way up the trunk of even the tallest trees. While we have just said it is a gentle pressure, that is true only in the case where the osmosis has free play, and the

pressure is stopped with the perfect mixing of the two liquids. But what if they can never mix? What may not the accumulated osmotic pressure amount to in such a one-sided process as goes on in root hairs with everything coming in and nothing going out. Cut-off stems, with a pressure gauge attached to them, indicate that in some plants the pressure is from 60 up to 170 pounds!

Another result of this pressure is that it keeps leaves and the fleshy stems of plants in their ordinary position. The actual solid part of nearly all leaves is scarcely 5 per cent of their bulk and all the rest is water. The constant pressure of this water from the roots is sufficient to keep leaves comparatively stiff and rigid, how stiff is quickly realized if the pressure stops and the leaf wilts or withers. Sometimes this osmotic pressure, particularly during rainy weather, becomes so great as to cause injury to the plant, the splitting of tomatoes and occasionally of plums, being due to it. This osmotic pressure, together with the extra pull given by the leaves, is sufficient to account for the rise of water to the tops of the tallest trees. The tallest trees in the world are certain kinds of blue gum in Australia which frequently reach a height exceeding 300 feet. What the combined osmotic pressure and leaf pull must be to carry such a heavy thing as water to such a great height is easier to imagine than to calculate.

The root hairs, then, by the process already described, absorb the water from the soil, but plants can no more live on water alone than we can. As we have seen, the membrane in the root hairs cannot allow the passage of even the tiniest particle of solid matter. In fact the root hair itself is so small that it can only be seen through the microscope, and of course the membrane is smaller still. Plant foods, then, can never be solids, but must always be such materials as can be dissolved in water. The chief of these are chemical substances, such as lime, potash, nitrogen, magnesium, phosphorus, sulphur, and iron. Hydrogen is also necessary, but as this makes up half the composition of water, there is a permanent supply of that provided by the soil water. These things make up the great part of plant foods taken in through the roots, and it is from these that leaves, by a process you already understand in its essential details, manufacture sugar and starch.

But neither starch nor sugar, important as they are to the plant, and absolutely necessary as they are to us, are the only things made by plants. Leaves may well be called factories, but plants are themselves the most wonderful chemical laboratories, beside which any built by man are as play-things. For plants, by processes too complicated to be explained here, work over their accumulation of starch and sugar, recombine some of their constituents, and store up in various parts of the plant the results, which are often such food ingredients as protein. This is the really essential food substance in wheat, as it is in eggs and meat. No chemist has ever succeeded in making a single scrap of it,

yet it is such an everyday occurrence in practically all plants that it, with starch and sugar, forms the great food supply of the world. Not protein alone, but all the amazing plant products like the oils from the olive and the resin from pine, rubber, the drugs of plant origin, even tobacco--all these and hundreds of others are made by plants from those few simple foods absorbed through the roots, literally pumped up to the leaves and there, under the magic of sunlight, combined and recombined, worked over and changed utterly in their make-up. Nothing could be more perfect than the marshaling of forces and contrivances to secure the result; let there be even the least bungling, and for us the world would cease to be worth fighting for.

Nor does the work of plants stop here. If it did, they would be not unlike a commission merchant who had gathered from the four corners of the earth a supply of eggs only to find he could not or more likely would not sell them all at once, and yet had failed to provide himself with proper storage. Plants, too, have times in their life when adequate storage is necessary for them. So true is this that unless there is food enough stored in seeds to give a start to seedlings before their own roots begin to work, they would die almost at once. In seeds and in many nearly dormant parts of plants these foods are stored away for future use. The tubers of potatoes and all our root crops, like beet and parsnip, are common examples of this. Even the manufacture of wood in the trunks of trees is a storage appliance on the part of the plant, for wood is just as much one of the food products of a plant as wheat or rice.

3. BORROWING FROM THE LIVING AND ROBBING FROM THE DEAD

With such a beautifully perfected mechanism for getting food it might seem as though all plants would be satisfied to lead that life of independence for which they are so splendidly equipped. Some of them, however, are like men in one respect: there seems to be no end to the chase after getting something for nothing. Those that stand on their own roots, get their food honestly, and take nothing for which they do not make prodigal returns, make up the great bulk of the vegetation of the earth. Their independence has dubbed them with the title

[Illustration: INDIAN PIPE. (_Monotropa uniflora_). A saprophytic plant inhabiting rich woods in eastern North America. (_Courtesy of Brooklyn Botanic Garden._)]

[Illustration: THE PARTRIDGE BERRY (_Mitchella repens_), a trailing vine of northern forests. (_Courtesy of Brooklyn Botanic Garden._)]

[Illustration: RAFFLESIA. ONE OF THE STRANGEST PRODUCTS OF THE RAIN FOREST. It consists only of a giant flower, the largest in the world, which is attached directly to the roots or stems of relatives of the

grape, upon which it is parasitic. (_After Kerner and Oliver. Courtesy of Brooklyn Botanic Garden._)]

autophytes_, literally solitary or self-providing plants, and this thrifty mode of life is called _autophytic_. But a few kinds of plants, actually many millions of individuals, have more devious ways of getting their food and provide strong contrast to their sturdier associates.

These baser modes of life appear to have been rather insidiously developed, as though there had been some hesitation at even the smallest departure from the normal. Of course we must not forget that plants, while living things, are never reasoning ones, and that good and evil and all other qualities that are ascribed to plants are perfectly foreign to them. Throughout this book, and in many others, the habits of plants are spoken of as base, for instance, or good. What is actually the fact is that nature works in truly marvelous ways, and to our reasoning faculties these adjustments seem clothed with attributes they do not really possess. But the description of them in the terms of our everyday speech, the translation of their behavior into the current conceptions of mankind, does so fix them in our minds that they cease to be “just plants,” and we no longer put their habits in the category of those interesting things that nearly everyone forgets.

One of the first signs of departure from the usual methods of getting food is the association of certain minute organisms at the roots upon which plants, otherwise autophytic, depend for aid in securing nourishment. This characteristic is fairly common, notably in all the plants of the pea family, such as peas, beans, locust trees, vetch, clover, and hundreds of others. If the roots of any of these be examined, it will be seen that attached to the smaller divisions of them are small tubercles from the size of a pinhead to a pea, depending on the kind. These tubercles or galls are caused by and infested with bacteria, the smallest of all plants. The bacteria have the extraordinary power of changing nitrogen into nitrates, which is the only form in which nitrogen can be absorbed by roots. Not only do they accomplish this, but excess nitrogen is stored in the roots by the same agency. It is this fact that has resulted in the planting of vetch and kindred plants for soil enrichment, as each year there is a residue of nitrogen left in their roots and by so much they add plant food to the soil. For hundreds of years farmers have done this, but only quite recently have we known why they did so. The occurrence of bacteria or microbes at the roots of plants is much more common than was formerly supposed to be the case, and many other plants than those of the pea family depend, at least in part, upon them in getting food from the soil. While not wholly autophytic, such plants do make some return for what they gain, as some of them at least pay dividends in extra nitrogen, and all of them provide opportunity for the bacteria to live. The latter play an important part in populating the soil, which is not the comparatively sterile thing it appears to be. Actually it is

infested with organisms that play a mighty, if rather inconspicuous, part in the work of preparing the soil for plant growth. These organisms are so minute and the chemical nature of their work is so complicated that merely to mention their existence must suffice here. This close association of certain roots and bacteria, which, as we have seen, is of mutual advantage, is known as _symbiosis_. It is really only a kind of exchange, not unlike the storybook community that helped out by taking in each other's washing. Unlike that community the association between the two works to the actual advantage of both, but the process is undeniably a step away from those wholly autophytic plants which live free and independent of such aid.

A much more gruesome habit of certain plants is their reliance for food only upon the dead. In the Indian pipe, some kinds of shinleaf, and in many other plants their roots and root hairs are changed or often nearly lacking, and we find them growing only on the dead bodies of other plants. One peculiarly repulsive characteristic of such plants is that they secrete at their roots a substance that hastens the decay of the dead, and, as if this were not rapid enough, there are associated with them certain kinds of minute fungus organisms that also speed up decomposition. Plants with this charming mode of life are known as _saprophytes_, literally _sapros_, rotten, and _phytes_, plants. "Rotten plants" they may be in their mode of life, but the pearly white stems and flowers of the Indian pipe have a certain ghostly charm, an almost statuesque beauty among the normal greenery of the gloomy dark woods in which they always grow. It is not without significance that Indian pipe bears no leaves, has none or almost none of the life-giving green coloring matter which we have seen to be the almost priceless possession of plants which lead a different, and perhaps a better life. The great bulk of saprophytes bear no leaves, and some only partially wedded to the habit appear to be midway between bearing normal green leaves and bearing none, or much reduced ones that are quite unlike the busy factories we know normal green leaves to be. Plants with this method of getting their food, must of course grow in places where dead and decaying vegetation is plentiful, and often as such soil is turned up there may be noted a peculiar dank odor, suggestive not only of its origin, but of the fact that these "rotten plants" make their home in it. Some of our most beautiful orchids grow in this fashion, but even there, in spite of flowers that for beauty of form are without rivals, the plants have no green coloring matter in their leaves, which are often reduced or even wanting altogether.

It might almost seem as if demoralization, so far as food habits are concerned, had reached its lowest point in these plants that literally rob the dead, but there are still lower depths to which certain plants have been reduced. This consists of robbing the living, and such plants are called _parasites_, a word perfectly familiar in other connections. Parasitic plants have no roots, but attach themselves to the roots of other plants, somewhat generously called _hosts_, from which they derive

their food. The best known case is the common Christmas mistletoe, and the dodder (Figure 68), but there are hundreds of others. Nothing in all the realm of plant life so perfectly fits the action to the word as plants of this type, flourishing when the host flourishes, dying when it dies. Producing flowers and seeds, and often, by an irony of fate, perfectly green leaves, they are nevertheless the most debased of all plants in their mode of life.

These successive steps in the degradation of food habits, are not always the clean-cut things they might be inferred to be from the foregoing. There are many intermediate stages; it may even prove to be the case that some plants are wholly autophytic at certain stages of their life, and slip partially into more devious practices at other stages. The whole affair is not yet thoroughly understood and may well be the result of competition, as it is quite conceivable that if the getting of food in normal ways became difficult or impossible plants may have had to resort to other methods.

[Illustration: FIG. 68.--THE DODDER

A leafless parasitic vine which steals its food from the plants to which it is attached.]

4. WHAT PLANTS DO WITH WATER AND HOW THEY BREATHE

Some one has said that one day without water would make men liars, in two days they become thieves, and after the third or fourth day they would kill to get water. In the Army Records at Washington is a report of one of our expeditions, which in chasing Indians got lost in a desert, and in which the soldiers fought among themselves for even the most repulsive liquids. It hardly needs these gruesome examples, however, to confirm what everyone who has ever been mildly thirsty knows, that water is an essential for all animals, and that to be without it is to suffer torture. Air of the proper kind is just as important, and because its absence or impurity causes more sudden agony and a quicker death, the need of it is that much more acute. Plants rely even more upon these two essentials of life, and in getting them they behave in ways just as ruthless as do men who are suddenly deprived of either of them.

As we have already seen in “How Plants Get Their Food and Water from the Soil,” the water is the carrier of the food elements from the soil, but water as such does much more for the plant than act as a carrier. Osmotic pressure, a never-ending pump, keeps sending up a steady stream of water to the limits of its power. In everything except trees it seems fairly certain that this pressure is sufficient to drive water into the remotest leaves. It finally reaches these tiny rooms in the leaf about which we read in the account of Leaves as Factories. And just here a

very curious thing happens. Each room is, as we have seen, a very busy place, crowded with all the necessary equipment to make sugar, and yet there is still room for water which is just as necessary as the other fittings; in fact so necessary is it that the whole interior of the room is bathed in water. This irrigation system works so well that the walls of the room literally bulge with the pressure of the water in them. If they did not--a condition known as turgor--the plant would at once wilt, and if no new supply came it would wither and die.

But water cannot stay in this condition of pressure and stagnation for even a brief period. That would be as if a leaf were like a toy balloon which, after inflation, had the entrance pinched and so remained inflated. And while we have all along spoken of factories for making sugar, and pressure pumps for forcing up food and water, it must never be forgotten that this marvelously adjusted mechanism is a living thing. Constantly growing, even producing their own means of falling in the autumn, leaves must be thought of as living machines, just as we are still more highly developed machines. In other words the accumulated water in the cells of the leaf must be removed, after it has served its use, and replaced by fresh supplies. The removal is carried on by its evaporation into the halls, or, in the more precise terms of our account of leaves as factories, into the _intercellular spaces_. It will be recalled that these are connected with the outside air through the pores or stoma. When the air outside is hot and dry it might easily suck out by evaporation all the water vapor in these intercellular spaces and wilting follow at once. This would actually happen if the guard cells, already mentioned, were not constantly on the job. They control the size of the opening just as certainly as a steam valve does, and maintain, with a few exceptions, just the proper amount of water loss not only to maintain turgor, but to see to it that transpiration, as this process is called, goes on rapidly enough to insure fresh supplies of water being sent to the leaf. The opening and closing of the stoma by the guard cells is a nicely balanced operation dependent upon root pressure, turgor, and atmospheric conditions. Guard cells have, because of this, been much studied in spite of the fact of their microscopic size. We now know that they allow greater openings during the night and reduce them during the day. When we reflect that the constant removal of water in the leaf, both as such, and as the only carrier of food supplies from the roots, depends in such large measure upon the functioning of these guard cells, then we come to some realization of their importance to the plant.

They do not always work unaided, for in many places the transpiration, even with their best efforts, would exceed the rise of water in the plant and death must follow if such a condition exists for long. This may be the case in certain bog plants, where, even with their roots in the water, they actually are in danger of drying out because the composition of bog water makes it partially unfit for most plants. And, again, in very open dry or windy places, such as deserts or the mountain

tops above timber line, the actual supply of water may be insufficient. Many plants growing in such places have their leaves, particularly the under surfaces of them, clothed with various kinds of hairs. These may be quite velvety or cottony, but in any event, either by their texture or their color, they tend to reduce transpiration. An extreme case is a desert plant from Arizona where the whole leaf surface is covered with an ashy gray velvety coating, which, of course, absorbs less heat than a normal green leaf, and in addition there are much fewer pores through which transpiration could be carried on. In ever so many leaves nature has provided them with a thick coating of hairs in early spring, which they lose later in the summer. Shrubs and herbs, especially those that start earlier than the trees under which they grow, very often may be found with a dense woolly or silky covering in early spring. As the shade becomes denser and the need of the protection less, the wool or silk is shed, sometimes completely. Some of the most conspicuous cases of this are certain kinds of our common shadbush, which in April are covered with a beautiful grayish-white silky coat, but by August are practically the ordinary green color of other leaves. The hairy covering of leaves is well worth observation, as it may hide not a few facts about transpiration and, in some leaves, has had much to do with their preservation from grazing animals. Some, like the common mullein, are never touched, and may be found standing like sentinels in fields otherwise cropped short.

In many leaves there is conflict between those forces that result in the leaf getting the utmost possible exposure to light and those that prevent too rapid transpiration. On the one hand there is the absolute necessity for light, on the other the ever-present danger that the response of leaves to this necessity will result in a transpiration rate too rapid to be held in check by the guard cells. The compromise between these two forces, each pulling in opposite directions, gives to some leaves a series of movements that are among the most interesting things in nature. One of the most marked examples is the common wild lettuce, a weedy plant of our roadsides introduced from Europe. In bright sunlight the leaves are turned so that the edge of the blade faces upward, and the surface is thus protected from the direct rays of the sun, but during cloudy weather or in the shade the leaves turn into the ordinary position of most foliage leaves. It is difficult to avoid the inference that photosynthesis, which, as we have seen is an absolute necessity to the leaf, is in the wild lettuce retarded by transpiration, to avoid the too rapid rate of which the leaf is turned on edge. In this plant the leaf base, as though to be ready for whatever change transpiration or photosynthesis may demand, is so attached to the stem that such changes are made with the least possible delay or wrenching. In one of the many kinds of blue gum trees of Australia all the leaves turn one way in the light, and another in shade or on cloudy days. Ever so many plants have partial movements of their leaves, a good many of which are in response to these opposing demands, one pulling the leaf into the greatest possible light, the other holding it away from that condition. There are

other movements of leaves, of parts of the flower, or even of the whole plant that are not so certainly the result of the conflict between light requirements and the necessity of conserving water supply. They will be considered presently.

While most plants are well provided with methods of losing water, so well provided in fact that in very hot or very long dry periods it is a common sight to see many plants literally panting for more water, there are some apparently more cautious individuals, who reverse this process. All throughout tropical America hundreds of relatives of the pineapple have their leaves so formed and arranged that they catch and hold considerable quantities of water. In one kind, called _Hohenbergia_, the long leaves are joined together toward their base into a water-tight funnel, which will hold a quart or two of water over a period of drought. In Africa the extraordinary traveler's-tree, a giant herb growing twenty to thirty feet tall, has the overlapping leaf bases so arranged that they hold many gallons of water. And we have already seen how the giant cactus of our own Southwest will hold 125 gallons. The most remarkable case is the Ibervillea from the deserts of Arizona. In riding over this country one may find objects that look not unlike a burned pudding, about two feet in diameter and nearly as high. From the center comes a delicate stalk with the finest feathery foliage and tiny flowers. Of roots there appear to be almost none, and these curious objects, which are very hard and woody, might almost be taken for stones. But they are actually plants not distantly related to squash and pumpkin, and one of them collected years ago and brought into a museum behaved in quite the most thrifty fashion of any plant yet discovered. It was carefully cleaned and put in a museum case and locked up as a curiosity for the wondering public to gaze at. But suddenly, almost miraculously, it sent out its delicate growth which grew its appointed time and then withered. Imagine the astonishment of the curators of this museum to find it doing the same thing the next year, and the next. Finally after putting forth its shoot for five years it actually died and is now a peaceful museum specimen. No other such case of water storage is known, but thousands of plants have this remarkable ability to a less degree, all in response to conditions that would mean destruction to plants not so providently equipped.

This conservation of water on such a great scale offers striking contrast to the truly prodigal habits of certain plants that actually drip water, so charged are they with this precious liquid, and so little stress do their conditions of life put them under in this respect. Where water is plentiful and turgor maintained almost to the bursting point, evaporation in a moist or chilly atmosphere does not suck out water vapor fast enough. Sometimes, around the edges of the leaves of the common garden nasturtium, drops of water may be found, literally forced out as drops, rather than transpired as water vapor. This happens to a considerable number of plants, during the night when transpiration is laggard, and such drops are usually mistaken for dew. The latter is

actually the condensation of moisture in the air upon the leaves of plants which cool down more rapidly than the air, and seldom due to the forcing out of drops of water from leaves, although in rare cases it may be. In tropical forests, where the humidity is very heavy and water supply from the roots copious, certain leaves leak water so fast and are so constructed that this excess is prevented from accumulating on the leaf. The pipal tree of India has long drip tips to its leaves that conduct the excess water from the blade to the end of the slender tip where it drips off. The advantage of these dripping points is obvious, for in regions so humid that water is forced out of the leaf, the coating of the leaf with this extra moisture would by that much retard transpiration. Dripping points, which in less exaggerated forms than in the pipal tree are common in many parts of the world, are thus of decided advantage.

Whether it be desirous to retain water or to lose it by gradual evaporation, or expel an excess of it, each species of plant has developed the apparatus to best preserve its individual life. While only the barest outline of these adjustments to the water requirements of plants has been given here, the details form an almost dramatic picture of struggle of the different kinds of plants for survival. The extremes are the desert plants on the one hand and those of the rain forests in the tropics on the other. The chapter on Plant Distribution will show how important these water requirements of plants have been in determining what grows on the earth to-day.

With carbon dioxide going in, oxygen, water vapor and, as we have seen, even liquid water coming out of the stoma of leaves, it might be surmised that these busy little pores and their guard cells had done work enough for the plant. And yet there is still one more act to play and the stoma have much to do with it. For this process of photosynthesis and the closely related one of supplying food and water to the leaf cannot go on without respiration, which is quite another thing. In plants respiration or breathing has no more to do with digestion than it does in man. Digestion in man is not unlike photosynthesis in plants, except that plants make food in the process while men destroy it. But plants must breathe just as we do, and, as we need oxygen to renew our vital processes, so do they. While respiration is a necessary part of plant activity it is not such an important part as photosynthesis, for which it is often mistaken. The thing to fix in our minds is that photosynthesis makes food, uses the sun’s energy and releases oxygen in the process, while respiration uses oxygen and might almost be likened to the oil of a machine--necessary but producing nothing.

5. RESTLESS AND IRRITABLE PLANTS

In walking through the quiet cathedrallike stillness of a deep forest or

over the fields and moors, perhaps our chief thought is how restful the scene is, and what a contrast the quiet, patient plants make to the darting insects or flitting birds that our walk disturbs. We found at the beginning of this book that ability to get about is one of the main differences between animals and plants. Like so many first thoughts, this is, however, only a half truth, for while most plants, seemingly by a kind of fatality, are anchored forever to the place of their birth, many of them do move certain parts of themselves and that quite regularly. While some of these movements have already been hinted at as a possible response to transpiration or too intense light, there are others where the advantage to the plant, if any, has yet to be demonstrated. These other movements, perhaps because their cause has never been discovered, seem the more mysterious as they certainly are more weird and interesting than almost any other of the curious things that plants do.

Perhaps the most difficult thing in the world is to keep an active growing child perfectly still for more than a few moments at a time. There seems to be some impelling force that makes young growing things in a constant state of restlessness, and it is perhaps not so extraordinary, after all, that practically all young plants are restless in the sense that they are never quite still. And, like many grown-up people who do not know what repose in their waking moments really means, there are a goodly number of plants that are restless until the day they die.

Charles Darwin, perhaps the greatest man that the last century produced, wrote a book in two volumes on these restless plants, and proved by a series of experiments illustrated by charts which the plants themselves drew for him, that there were perhaps no plants that do not move at least some part of themselves during the early stages of their career. While he never could explain the cause of these movements he left in that book an imperishable record of the amount and direction of these mysterious movements, which are almost to be likened to the growing pains of young children.

The tips or growing shoots of many plants will point in one direction in the early morning, a different way at noon and still a different one by nightfall. Hundreds of totally unrelated plants seem to have this habit of moving their tips through a definite cycle during each day and this restlessness does not appear to be of the slightest use to them. It cannot be response to the moving of the sun through the sky, for often the movement may be away from the direct sunshine, and sometimes the motion goes on in the dark, as experiments have proved.

It is hard to see the movement of the whole upper part of a plant, although it is well known that they do move in many cases. But in the tendrils the movement is often easy to observe and even to induce. Some of these slender aids to climbing plants, if they happen to be swinging

freely in the air, do actually make slow circular movements, that even if they were designed for the purpose could not more perfectly accomplish their obvious intent, which is to catch the nearest favorable support. These circular movements are to the left in the hop, honeysuckle and many other plants, to the right in the climbing beans, morning-glory and some others. When the tendril reaches a support it almost immediately turns about it, in the same direction as its free movements through the air have been. It is thus this apparently aimless swinging of tendrils through space that determines whether the vine is going to twine to the right or left. The speed with which a tendril will take its first turns about a support is so comparatively rapid that, once the support is caught there is scarcely a chance of the vine being torn away by the wind or other agency as would surely happen if tendril movements were the leisurely things that some folks think they are. In the case of one Passion-flower vine, which are gorgeous climbers mostly from the tropics, the tendril made a complete turn in two minutes after it first touched a possible support. And there is a quite noticeable movement in thirty seconds if the tip of the tendril be ever so lightly touched. Teasing tendrils to see how much or how fast they will coil has resulted in some extraordinary cases of the “comeback” of some of them. Darwin irritated a tendril for a few moments and induced a partial coiling which straightened out when the object causing it was withdrawn. To see how long the plant would stand this sort of thing and still not be literally tired of coiling he succeeded in making the plant partially coil, and by withdrawing the incentive uncoil again, over twenty times in fifty-four hours. An impulse to coil of such persistence as this naturally results in vines forming the impenetrable thickets they do in many forests. It emphasizes how restless are the growing points of these climbers, and serves as a striking illustration of those gradual movements of many other plants that seem to have some relation to growth, but in a way not yet understood. For while it is an obvious advantage for the vine to swing its tendrils through the air this advantage has not yet been proved the cause of the swinging. In fact if all possible supports are removed the tendril will often coil anyway, a perfectly futile proceeding, that looks almost like disgust.

This general restlessness, which by the imaginative has been thought of as a mild protest by plants at their otherwise fixed position, is not so spectacular as that of certain other plants, notably the poplars. A flattened instead of a round leafstalk makes the leaves of these trees flutter in the lightest air and in a gale the tree is a mass of animated foliage. No use has ever been found for this curious habit and it is not certain that it is of the least advantage to the tree. If anything, the constant movement may have the decided disadvantage of increasing transpiration.

In our common wood sorrel the leaflets on cloudy days or during the night regularly “go to sleep.” That is, they are folded at such times, rather than spread out in the ordinary way. These sleep movements may

have something to do with transpiration, but whether or not this is true they are very regular and in certain plants the habit is remarkably and rather mysteriously uniform. Why, for instance, do the leaflets of these wood sorrels, the beans, lupine, locust tree and licorice plant, always fold downward while the clovers, vetch, peas, and bird's-foot trefoil are always folded upward? Such movements and their direction are among the unsolved problems of botany, and merely to know of them or observe them leads us nowhere as to their true inwardness.

But quite apart from these merely restless plants, and there are thousands of different kinds which are known to move slightly, at least during their young stages, are a few more decidedly active ones that are seemingly irritable. At least they show peculiar movements if touched, and at night. One of the best known is the sensitive plant from tropical America. Its twice compound leaf is composed of many tiny leaflets which upon the slightest touch close up and apparently wither on their stalk at once. In five seconds after the leaf is touched it will appear like a wilted wreck. If the jar is sharp enough the whole plant will droop, and the response to a sudden jar is almost electrically quick in its action. And yet all this sudden wilting, actually caused by a quick loss of turgor, is slowly repaired and the plant carries on quite normally again until another shock renews its irritable response. This plant does the same thing gradually during the night, except that the leaflets recover their normal position only with the rise of the sun.

From India comes the most remarkable of all plants so far as movements are concerned. For in the telegraph plant the movements are so regular and long continued that irritability might almost be said to be continuous. The plant is a low shrub or herb with compound leaves, and the terminal leaflet, which is much larger than its neighbors on either side of their common stalk, performs a motion that describes with its tip an irregular oval or ellipse. But the movement is not steady; it goes by a series of slight but perfectly distinct jerks. It takes about two minutes for the leaf to complete its cycle, and it is this jerky movement that has given the plant its name. During the night its leaflets stop this apparently quite useless performance, the cause of which is quite unknown. It is often grown in greenhouse collections where its strange movements may be seen on any sunny day.

Many other cases of the restlessness or irritability of plants could be given, and nothing has been said here of the curious movements of some insectivorous plants as they have already been mentioned. The very considerable movements of certain flower and fruit organs will also be considered elsewhere.

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It cannot have escaped the thoughtful reader that all of this chapter on plant behavior has dealt with those functions of plants in which roots,

stems, or leaves play the chief part. These purely vegetative actions of plants, what might almost be called their bread and butter activities, would never lead to perpetuating their kind. For while all of these functions are necessary, except certain apparently wayward movements which still remain unexplained, they are in a sense only the preparation for an infinitely more important act, the reproduction of their kind. What the poetic have called the love of the flowers, or in more prosaic but perhaps more truthful words the fertilization, pregnancy, and birth of the new race, will be considered in a separate chapter. No other act of the plant world is so interesting as the mechanism of reproduction, the almost endless devices for securing it, and the ingenuity of nature in seeing to it that there are no flukes.

Definitions from Project Gutenberg's *The New Gresham Encyclopedia. Vol. 1 Part 3,* by Various

BAS´TIAN, Henry Charlton, English physician and biologist, born at Truro in 1837, died on 17th Nov., 1915. He was educated at Falmouth and at University College, London, where he was assistant curator in the museum from 1860 to 1863. He obtained the degree of M.A. in 1861 from the University of London, graduating subsequently in medicine at the same university (M.B. 1863, M.D. 1866). From 1864 to 1866 he was a medical officer in Broadmoor Criminal Lunatic Asylum, and in 1866 was appointed lecturer on pathology and assistant physician in St. Mary's Hospital. In 1867 he became professor of pathological anatomy in University College, subsequently he was also professor of clinical medicine, and in the period 1887-95 he occupied the chair of medicine and clinical medicine. Apart from numerous contributions to medical and other periodicals, and to Quain's _Dictionary of Medicine_, he published _The Modes of Origin of Lowest Organisms_ (1871); _The Beginnings of Life_ (1872); _Evolution and the Origin of Life_ (1874); _Lectures on Paralysis from Brain Disease_ (1875); _The Brain as an Organ of Mind_ (1880); which has been translated into French and German; _The Nature and Origin of Living Matter_; _Evolution of Life_; _Origin of Life_; &c.

BASTILLE (b[.a]s-t[=e]l´), a French name for any strong castle provided with towers, but as a proper name the State prison and citadel of Paris, which was built about 1370 by Charles V. It was ultimately used chiefly for the confinement of persons of rank who had fallen victims to the intrigues of the Court or the caprice of the Government. (See _Cachet, Lettres de_.) The capture of the Bastille by the Parisian mob, 14th July, 1789, was the opening act of the Revolution. On that date the Bastille was surrounded by a tumultuous mob, who first attempted to negotiate with the Governor, Delaunay, but when these negotiations failed, began to attack the fortress. For several hours the mob continued their siege without being able to

effect anything more than an entrance into the outer court of the Bastille; but at last the arrival of some of the Royal Guard with a few pieces of artillery forced the Governor to let down the second drawbridge and admit the populace. The Governor was seized, but on the way to the Hotel de Ville he was torn from his captors and put to death. The next day the destruction of the Bastille commenced. Not a vestige of it exists, but its site is marked by a column in the Place de la Bastille.--BIBLIOGRAPHY: François Ravaisson, _Les Archives de la Bastille_; Arnold, _Histoire de la Bastille_; Bingham, _The Bastille_; Funck-Brentano, _The Bastille_; M.J. de Staal, _La Bastille sous la Régence_ (edited by Funck-Brentano).

BAT, one of the group of wing-handed, flying mammals, having the fore-limb peculiarly modified so as to serve for flight, and constituting the order Cheiroptera. Bats are animals of the twilight and darkness, and are common in temperate and warm regions, but are most numerous and largest in the tropics. All European bats are small, and have a mouse-like skin. The body of the largest British species, _Vespertilio noct[)u]la_, is less than that of a mouse, but its wings stretch about 15 inches. During the day it remains in caverns, in the crevices of ruins, hollow trees, and similar lurking places, and flits out at evening in search of food, which consists of insects. Several species of the same genus are common in North America. Many bats are remarkable for having a singular nasal cutaneous appendage, bearing in some cases a fancied resemblance to a horse-shoe. Bats may be conveniently divided into two sections--the insectivorous or carnivorous, comprising all European and most African and American species; and the fruit-eating, belonging to tropical Asia and Australia, with several African forms. An Australian fruit-eating bat (_Pter[)o]pus ed[=u]lis_), commonly known as the kalong or flying-fox, is the largest of all the bats; it does much mischief in orchards. At least two species of South American bats are known to suck the blood of other mammals, and thence are called 'vampire-bats'. All the British bats belong to the insectivorous group, the fruit-eating and blood-sucking bats being confined to warmer regions. There are fifteen species on the British list, but of these three are very rare. Among the most noteworthy forms are the greater and the lesser horse-shoe bats, in which the ears are nearly as long as the whole body. As winter approaches, in cold climates bats seek shelter in caverns, vaults, ruinous and deserted buildings, and similar retreats, where they cling together in large clusters, hanging head downwards by the feet, and remain in a torpid condition until the returning spring recalls them to active exertions. Bats generally bring forth two young. The parent shows a strong degree of attachment to her offspring, and, when they are captured, will follow them, and even submit to captivity herself rather than forsake her charge.

BAZAINE (b[.a]-z[=a]n), François Achille, French general, born 1811, died 1888. He entered the army as a private soldier in 1831, and served in Algeria with distinction, gaining the cross of the Legion of Honour, and

rising to the rank of lieutenant. He next went to Spain and fought in the Foreign Legion against the Carlists; and in 1839 returned to Algeria, where he eventually held the rank of colonel (1850). He was next engaged in the Crimean War, being at first commander of a brigade and then general of division, leading the French troops sent to attack the fortress of Kinburn (1855). He did good service also in the Italian war of 1859, being actively engaged in the battle of Solferino. His military reputation was increased by the part he took in the Mexican expedition (1862-4), in which he led the first division under Forey, and when this general was recalled became commander-in-chief of the French forces in Mexico and marshal of France. His loyalty, however, to the cause of the Emperor Maximilian was very doubtful. In 1870 he took command of the army of the Rhine, or the third army corps, in the Franco-German War, collected a very large army in the neighbourhood of Metz, and had the intention of joining his forces with those of MacMahon at Châlons. He found this impossible, however, especially after Gravelotte, and was forced into Metz, where he capitulated after a seven weeks' siege, with an army of 175,000 men. For this act he was tried by court-martial in 1871, found guilty of treason, and condemned to death. The sentence was commuted to twenty years' seclusion in the Isle of St. Marguerite, from which he escaped in 1874, and retired to Spain. He published _Épisodes de la Guerre de 1870_.--BIBLIOGRAPHY: La Brugère, _L'Affaire Bazaine_; Comte d'Herisson, _La Légende de Metz_.

BEARDSLEY, Aubrey Vincent, artist in black and white, born 1872, died 1898; took up art as a profession at the age of nineteen, and executed a large number of drawings for books and periodicals, showing great technical skill, originality, and disregard of conventionality, with sometimes a tendency towards the repulsive or morbid. Consumption had marked him as its victim from the first. Collections of his drawings were published under the titles _A Book of Fifty Drawings_, _The Early Work of Aubrey Beardsley_, _The Late Work of Aubrey Beardsley_, &c. _Under the Hill_, with his letters and poems, was published in 1904. Cf. G. Derry, _An Aubrey Beardsley Scrap-book_.

BEAUMONT (b[=o]´mont), Francis, and FLETCHER, John, two eminent English dramatic writers, contemporaries of Shakespeare, and the most famous of literary partners. The former, son of a common-pleas judge, was born at Grace-Dieu, in Leicestershire, in 1584, died in 1616, and was buried in Westminster Abbey. At the age of sixteen he published a translation, in verse, of Ovid's _Fable of Salmacis and Hermaphroditus_, and before nineteen became the friend of Ben Jonson. With Fletcher also he was early on terms of friendship. He married Ursula, daughter of Henry Isley of Sundridge, in Kent, by whom he left two daughters.--_John Fletcher_ was born at Rye, Sussex, in 1579. His father was successively Dean of Peterborough, Bishop of Bristol, Worcester, and London. _The Woman Hater_, produced in 1606-7, is the earliest work known to exist in which he had a

hand. It does not appear that he was ever married. He died in London of the plague, Aug., 1625, and was buried at St. Saviour's, Southwark. The friendship of Beaumont and Fletcher, like their literary partnership, was singularly close; they lived in the same house, and are said to have even had their clothes in common. The works that pass under their names consist of over fifty plays, a masque, and some minor poems. It is believed that all the minor poems except one were written by Beaumont. After the death of Beaumont, Fletcher continued to write plays alone or with other dramatists. It is now difficult, if not indeed impossible, to determine with certainty the respective shares of the two poets in the plays passing under their names. According to the testimony of some of their contemporaries, Beaumont possessed the deeper and more thoughtful genius, Fletcher the gayer and more idyllic. _Four Plays in One_, _Wit at Several Weapons_, _Thierry and Theodoret_, _Maid's Tragedy_, _Philaster_, _King and no King_, _Knight of the Burning Pestle_, _Cupid's Revenge_, _Little French Lawyer_, _Scornful Lady_, _Coxcomb_, and _Laws of Candy_ have been assigned to Beaumont and Fletcher conjointly. To Beaumont alone--_The Masque of the Inner Temple and Gray's Inn_. To Fletcher alone--_The Faithful Shepherdess_, _Woman Hater_, _Loyal Subject_, _Mad Lover_, _Valentinian_, _Double Marriage_, _Humorous Lieutenant_, _Island Princess_, _Pilgrim_, _Wild-goose Chase_, _Spanish Curate_, _Beggar's Bush_, _Rule a Wife and Have a Wife_, _Fair Maid of the Inn_, &c. To Fletcher and Rowley--_Queen of Corinth_, _Maid of the Mill_, and _Bloody Brother_. To Fletcher and Massinger--_False One_ and _Very Woman_. To Fletcher and Shirley--_Noble Gentleman_, _Night-walker_, and _Love's Pilgrimage_. To Fletcher and Shakespeare--_Two Noble Kinsmen_.--BIBLIOGRAPHY: G. C. Macaulay, _Francis Beaumont, a Critical Study_; Sir A. W. Ward, _History of English Dramatic Literature_ (vol. ii).

BECQUEREL RAYS (bek-rel), the rays given out by radium and other 'radioactive' substances, so named from their discoverer, the French physicist, Henri Becquerel (born 1852, died 1908), son of Alexandre Edmond Becquerel. They were first detected in 1896, as proceeding from uranium salts; and it is only by uranium, thorium, radium, and one or two other elements that they are emitted, these bodies giving them out spontaneously and without any apparent loss of radioactive power or change of any kind. The Becquerel rays are invisible, and only known by their effects, which are of various kinds: thus, like the Röntgen rays, they blacken a photographic plate, even after passing through glass or other intervening substances; they cause a number of different substances to give out a fluorescent light, and they render air a conductor of electricity. Like the Röntgen rays, they act strongly on the human skin. They consist of a mixture of [alpha]-, [beta]-, and [gamma]-rays. See _Radio-activity_; _Radium_.

Definitions from Project Gutenberg's *The Nuttall Encyclopaedia*, by Edited by Rev. James Wood

BELGIUM (6,136), a small European State bordering on the North Sea, with Holland to the N., France to the S., and Rhenish Prussia and Luxemburg on the E.; is less than a third the size of Ireland, but it is the most densely populated country on the Continent. The people are of mixed stock, comprising Flemings, of Teutonic origin; Walloons, of Celtic origin; Germans, Dutch, and French. Roman Catholicism is the predominant religion. Education is excellent; there are universities at Ghent, Liège, Brussels, and Louvain. French is the language of educated circles and of the State; but the prevalence of dialects hinders the growth of a national literature. The land is low and level and fertile in the N. and W., undulating in the middle, rocky and hilly in the S. and E. The Meuse and Scheldt are the chief rivers, the basin of the latter embracing most of the country. Climate is similar to the English, with greater extremes. Rye, wheat, oats, beet, and flax are the principal crops. Agriculture is the most painstaking and productive of the world. The hilly country is rich in coal, iron, zinc, and lead. After mining, the chief industries are textile manufactures and making of machinery: the former at Antwerp, Ghent, Brussels, and Liège; the latter at Liège, Mons, and Charleroi. The trade is enormous; France, Germany, and Britain are the best customers. Exports are coal to France; farm products, eggs, &c., to England; and raw material imported from across seas, to France and the basin of the Rhine. It is a small country of large cities. The capital is Brussels (480), in the centre of the kingdom, but communicating with the ocean by a ship canal. The railways, canals, and river navigation are very highly developed. The government is a limited monarchy; the king, senate, and house of representatives form the constitution. There is a conscript army of 50,000 men, but no navy. Transferred from Spain to Austria in 1713. Belgium was under French sway from 1794 till 1814, when it was united with Holland, but established its independence in 1830.

BELLER`OPHON, a mythical hero, son of Glaucus and grandson of Sisyphus; having unwittingly caused the death of his brother, withdrew from his country and sought retreat with Proetus, king of Argos, who, becoming jealous of his guest, but not willing to violate the laws of hospitality, had him sent to Iobates, his son-in-law, king of Lycia, with instructions to put him to death. Iobates, in consequence, imposed upon him the task of slaying the Chimæra, persuaded that this monster would be the death of him. Bellerophon, mounted on Pegasus, the winged horse given him by Pallas, slew the monster, and on his return received the daughter of Iobates to wife.

BUTLER, SAMUEL, a master of burlesque, born at Strensham, in Worcestershire, the son of a small farmer; the author of "Hudibras," a poem of about 10,000 octosyllabic lines, in which he subjects to ridicule

the ideas and manners of the English Puritans of the Civil War and the Commonwealth; it appeared in three parts, the first in 1663, the second soon after, and the third in 1678; it is sparkling with wit, yet is hard reading, and few who take it up read it through; was an especial favourite with Charles II., who was never weary of quoting from it. "It represents," says Stopford Brooke, "the fierce reaction that (at the Restoration) had set in against Puritanism. It is justly famed," he adds, "for wit, learning, good sense, and ingenious drollery, and, in accordance with the new criticism, is absolutely without obscurity. It is often as terse as Pope's best work; but it is too long; its wit wearies us at last, and it undoes the force of its attacks on the Puritans by its exaggeration" (1612-1680).

BEAUTY

Project Gutenberg's *Voltaire's Philosophical Dictionary*, by Voltaire

Ask a toad what beauty is, the _to kalon_? He will answer you that it is his toad wife with two great round eyes issuing from her little head, a wide, flat mouth, a yellow belly, a brown back. Interrogate a Guinea negro, for him beauty is a black oily skin, deep-set eyes, a flat nose. Interrogate the devil; he will tell you that beauty is a pair of horns, four claws and a tail. Consult, lastly, the philosophers, they will answer you with gibberish: they have to have something conforming to the arch-type of beauty in essence, to the _to kalon_.

One day I was at a tragedy near by a philosopher. "How beautiful that is!" he said.

"What do you find beautiful there?" I asked.

"It is beautiful," he answered, "because the author has reached his goal."

The following day he took some medicine which did him good. "The medicine has reached its goal," I said to him. "What a beautiful medicine!" He grasped that one cannot say a medicine is beautiful, and that to give the name of "beauty" to something, the thing must cause you to admire it and give you pleasure. He agreed that the tragedy had inspired these sentiments in him, and that there was the _to kalon_, beauty.

We journeyed to England: the same piece, perfectly translated, was played there; it made everybody in the audience yawn. "Ho, ho!" he said, "the _to kalon_ is not the same for the English and the French." After

much reflection he came to the conclusion that beauty is often very relative, just as what is decent in Japan is indecent in Rome, and what is fashionable in Paris, is not fashionable in Pekin; and he saved himself the trouble of composing a long treatise on beauty.

There are actions which the whole world finds beautiful. Two of Cæsar's officers, mortal enemies, send each other a challenge, not as to who shall shed the other's blood with tierce and quarte behind a thicket as with us, but as to who shall best defend the Roman camp, which the Barbarians are about to attack. One of them, having repulsed the enemy, is near succumbing; the other rushes to his aid, saves his life, and completes the victory.

A friend sacrifices his life for his friend; a son for his father....
The Algonquin, the Frenchman, the Chinaman, will all say that that is very _beautiful_, that these actions give them pleasure, that they admire them.

They will say as much of the great moral maxims, of Zarathustra's--"In doubt if an action be just, abstain..."; of Confucius'--"Forget injuries, never forget kindnesses."

The negro with the round eyes and flat nose, who will not give the name of "beauties" to the ladies of our courts, will without hesitation give it to these actions and these maxims. The wicked man even will recognize the beauty of these virtues which he dare not imitate. The beauty which strikes the senses merely, the imagination, and that which is called "intelligence," is often uncertain therefore. The beauty which speaks to the heart is not that. You will find a host of people who will tell you that they have found nothing beautiful in three-quarters of the Iliad; but nobody will deny that Codrus' devotion to his people was very beautiful, supposing it to be true.

There are many other reasons which determine me not to write a treatise on beauty.

BRITISH PAINTING.

The Project Gutenberg EBook of *A Text-Book of the History of Painting*, by John C. Van Dyke

BOOKS RECOMMENDED: Armstrong, _Sir Henry Raeburn_; Armstrong, _Gainsborough_; Armstrong, _Sir Joshua Reynolds_; Burton, _Catalogue of Pictures in National Gallery_;

Chesneau, _La Peinture Anglaise_; Cook, _Art in England_; Cunningham, _Lives of the most Eminent British Artists_; Dobson, _Life of Hogarth_; Gilchrist, _Life of Etty_; Gilchrist, _Life of Blake_; Hamerton, _Life of Turner_; Henderson, _Constable_; Hunt, _The Pre-Raphaelite Brotherhood_ (_Contemporary Review, Vol. 49_); Leslie, _Sir Joshua Reynolds_; Leslie, _Life of Constable_; Martin and Newbery, _Glasgow School of Painting_; McKay, _Scottish School of Painting_; Monkhouse, _British Contemporary Artists_; Redgrave, _Dictionary of Artists of the English School_; Romney, _Life of George Romney_; Rossetti, _Fine Art, chiefly Contemporary_; Ruskin, _Pre-Raphaelitism_; Ruskin, _Art of England_; Sandby, _History of Royal Academy of Arts_; William Bell Scott, _Autobiography_; Scott, _British Landscape Painters_; Stephens, _Catalogue of Prints and Drawings in the British Museum_; Swinburne, _William Blake_; Temple, _Painting in the Queen's Reign_; Van Dyke, _Old English Masters_; Wedmore, _Studies in English Art_; Wilmot-Buxton, _English Painters_; Wright, _Life of Richard Wilson_.

[Illustration: FIG. 94.--HOGARTH. SHORTLY AFTER MARRIAGE. NAT. GAL. LONDON.]

BRITISH PAINTING: It may be premised in a general way, that the British painters have never possessed the pictorial cast of mind in the sense that the Italians, the French, or the Dutch have possessed it. Painting, as a purely pictorial arrangement of line and color, has been somewhat foreign to their conception. Whether this failure to appreciate painting as painting is the result of geographical position, isolation, race temperament, or mental disposition, would be hard to determine. It is quite certain that from time immemorable the English people have not been lacking in the appreciation of beauty; but beauty has appealed to them, not so much through the eye in painting and sculpture, as through the ear in poetry and literature. They have been thinkers, reasoners, moralists, rather than observers and artists in color. Images have been brought to their minds by words rather than by forms. English poetry has existed since the days of Arthur and the Round Table, but English painting is of comparatively modern origin, and it is not wonderful that the original leaning of the people toward literature and its sentiment should find its way into pictorial representation. As a result one may say in a very general way that English painting is more illustrative than creative. It endeavors to record things that might be more pertinently and completely told in poetry, romance, or history. The conception of large art--creative work of the Rubens-Titian type--has not been given to the English painters, save in exceptional cases. Their success has been in portraiture and landscape, and this largely by reason of

following the model.

EARLY PAINTING: The earliest decorative art appeared in Ireland. It was probably first planted there by missionaries from Italy, and it reached its height in the seventh century. In the ninth and tenth centuries missal illumination of a Byzantine cast, with local modifications, began to show. This lasted, in a feeble way, until the fifteenth century, when work of a Flemish and French nature took its place. In the Middle Ages there were wall paintings and church decorations in England, as elsewhere in Europe, but these have now perished, except some fragments in Kempley Church, Gloucestershire, and Chaldon Church, Surrey. These are supposed to date back to the twelfth century, and there are some remains of painting in Westminster Abbey that are said to be of thirteenth and fourteenth-century origin. From the fifteenth to the eighteenth century the English people depended largely upon foreign painters who came and lived in England. Mabuse, Moro, Holbein, Rubens, Van Dyck, Lely, Kneller--all were there at different times, in the service of royalty, and influencing such local English painters as then lived. The outcome of missal illumination and Holbein's example produced in the sixteenth and seventeenth centuries a local school of miniature-painters of much interest, but painting proper did not begin to rise in England until the beginning of the eighteenth century--that century so dead in art over all the rest of Europe.

FIGURE AND PORTRAIT PAINTERS: Aside from a few inconsequential precursors the first English artist of note was Hogarth (1697-1764). He was an illustrator, a moralist, and a satirist as well as a painter. To point a moral upon canvas by depicting the vices of his time was his avowed aim, but in doing so he did not lose sight of pictorial beauty. Charm of color, the painter's taste in arrangement, light, air, setting, were his in a remarkable degree. He was not successful in large compositions, but in small pictures like those of the Rake's Progress he was excellent. An early man, a rigid stickler for the representation, a keen observer of physiognomy, a satirist with a sense of the absurd, he was often warped in his art by the necessities of his subject and was sometimes hard and dry in method, but in his best work he was quite a perfect painter. He was the first of the English school, and perhaps the most original of that school. This is quite as true of his technic as of his point of view. Both were of his own creation. His subjects have been talked about a great deal in the past; but his painting is not to this day valued as it should be.

[Illustration: FIG. 95.--REYNOLDS. COUNTESS SPENCER AND LORD ALTHORP.]

The next man to be mentioned, one of the most considerable of all the English school, is Sir Joshua Reynolds (1723-1792). He was a pupil of Hudson, but owed his art to many sources. Besides the influence of Van

Dyck he was for some years in Italy, a diligent student of the great Italians, especially the Venetians, Correggio, and the Bolognese Eclectics. Sir Joshua was inclined to be eclectic himself, and from Italy he brought back a formula of art which, modified by his own individuality, answered him for the rest of his life. He was not a man of very lofty imagination or great invention. A few figure-pieces, after the Titian initiative, came from his studio, but his reputation rests upon his many portraits. In portraiture he was often beyond criticism, giving the realistic representation with dignity, an elevated spirit, and a suave brush. Even here he was more impressive by his broad truth of facts than by his artistic feeling. He was not a painter who could do things enthusiastically or excite enthusiasm in the spectator. There was too much of rule and precedent, too much regard for the traditions, for him to do anything strikingly original. His brush-work and composition were more learned than individual, and his color, though usually good, was oftentimes conventional in contrasts. Taking him for all in all he was a very cultivated painter, a man to be respected and admired, but he had not quite the original spirit that we meet with in Gainsborough.

Reynolds was well-grounded in Venetian color, Bolognese composition, Parmese light-and-shade, and paid them the homage of assimilation; but if Gainsborough (1727-1788) had such school knowledge he positively disregarded it. He disliked all conventionalities and formulas. With a natural taste for form and color, and with a large decorative sense, he went directly to nature, and took from her the materials which he fashioned into art after his own peculiar manner. His celebrated Blue Boy was his protest against the conventional rule of Reynolds that a composition should be warm in color and light. All through his work we meet with departures from academic ways. By dint of native force and grace he made rules unto himself. Some of them were not entirely successful, and in drawing he might have profited by school training; but he was of a peculiar poetic temperament, with a dash of melancholy about him, and preferred to work in his own way. In portraiture his color was rather cold; in landscape much warmer. His brush-work was as odd as himself, but usually effective, and his accessories in figure-painting were little more than decorative after-thoughts. Both in portraiture and landscape he was one of the most original and most English of all the English painters--a man not yet entirely appreciated, though from the first ranked among the foremost in English art.

[Illustration: FIG. 96.--GAINSBOROUGH. BLUE BOY.]

Romney (1734-1802), a pupil of Steele, was often quite as masterful a portrait-painter as either Reynolds or Gainsborough. He was never an artist elaborate in composition, and his best works are bust-portraits with a plain background. These he did with much dash and vivacity of manner. His women, particularly, are fine in life-like pose and

winsomeness of mood. He was a very cunning observer, and knew how to arrange for grace of line and charm of color.

After Romney came Beechey (1753-1839), Raeburn (1756-1823), Opie (1761-1807), and John Hoppner (1759-1810). Then followed Lawrence (1769-1830), a mixture of vivacious style and rather meretricious method. He was the most celebrated painter of his time, largely because he painted nobility to look more noble and grace to look more gracious. Fond of fine types, garments, draperies, colors, he was always seeking the sparkling rather than the true, and forcing artificial effects for the sake of startling one rather than stating facts simply and frankly. He was facile with the brush, clever in line and color, brilliant to the last degree, but lacking in that simplicity of view and method which marks the great mind. His composition was rather fine in its decorative effect, and, though his lights were often faulty when compared with nature, they were no less telling from the stand-point of picture-making. He is much admired by artists to-day, and, as a technician, he certainly had more than average ability. He was hardly an artist like Reynolds or Gainsborough, but among the mediocre painters of his day he shone like a star. It is not worth while to say much about his contemporaries. Etty (1787-1849) was one of the best of the figure men, but his Greek types and classic aspirations grow wearisome on acquaintance; and Sir Charles Eastlake (1793-1865), though a learned man in art and doing great service to painting as a writer, never was a painter of importance.

William Blake (1757-1827) was hardly a painter at all, though he drew and colored the strange figures of his fancy and cannot be passed over in any history of English art. He was perhaps the most imaginative artist of English birth, though that imagination was often disordered and almost incoherent. He was not a correct draughtsman, a man with no great color-sense, and a workman without technical training; and yet, in spite of all this, he drew some figures that are almost sublime in their sweep of power. His decorative sense in filling space with lines is well shown in his illustrations to the Book of Job. In grace of form and feeling of motion he was excellent. Weird and uncanny in thought, delving into the unknown, he opened a world of mystery, peopled with a strange Apocalyptic race, whose writhing, flowing bodies are the epitome of graceful grandeur.

[Illustration: FIG. 97.--CONSTABLE. CORN FIELD. NAT. GAL. LONDON.]

GENRE-PAINTERS: From Blake to Morland (1763-1804) is a step across space from heaven to earth. Morland was a realist of English country life, horses at tavern-doors, cattle, pigs. His life was not the most correct, but his art in truthfulness of representation, simplicity of painting, richness of color and light, was often of a fine quality. As a skilful technician he stood quite alone in his time, and seemed to

show more affinity with the Dutch _genre_-painters than his own countrymen. His works are much prized to-day, and were so during the painter's life.

Sir David Wilkie (1785-1841) was also somewhat like the Dutch in subject, a _genre_-painter, fond of the village fête and depicting it with careful detail, a limpid brush, and good textural effects. In 1825 he travelled abroad, was gone some years, was impressed by Velasquez, Correggio, and Rembrandt, and completely changed his style. He then became a portrait and historical painter. He never outlived the nervous constraint that shows in all his pictures, and his brush, though facile within limits, was never free or bold as compared with a Dutchman like Steen. In technical methods Landseer (1802-1873), the painter of animals, was somewhat like him. That is to say, they both had a method of painting surfaces and rendering textures that was more "smart" than powerful. There is little solidity or depth to the brush-work of either, though both are impressive to the spectator at first sight. Landseer knew the habits and the anatomy of animals very well, but he never had an appreciation of the brute in the animal, such as we see in the pictures of Velasquez or the bronzes of Barye. The Landseer animal has too much sentiment about it. The dogs, for instance, are generally given those emotions pertinent to humanity, and which are only exceptionally true of the canine race. This very feature--the tendency to humanize the brute and make it tell a story--accounts in large measure for the popularity of Landseer's art. The work is perhaps correct enough, but the aim of it is somewhat afield from pure painting. It illustrates the literary rather than the pictorial. Following Wilkie the most distinguished painter was Mulready (1786-1863), whose pictures of village boys are well known through engravings.

[Illustration: FIG. 98.--TURNER. FIGHTING TÉMÉRAIRE. NAT. GAL. LONDON.]

THE LANDSCAPE PAINTERS: In landscape the English have had something to say peculiarly their own. It has not always been well said, the coloring is often hot, the brush-work brittle, the attention to detail inconsistent with the large view of nature, yet such as it is it shows the English point of view and is valuable on that account. Richard Wilson (1713-1782) was the first landscapist of importance, though he was not so English in view as some others to follow. In fact, Wilson was nurtured on Claude Lorrain and Joseph Vernet and instead of painting the realistic English landscape he painted the pseudo-Italian landscape. He began working in portraiture under the tutorship of Wright, and achieved some success in this department; but in 1749 he went to Italy and devoted himself wholly to landscapes. These were of the classic type and somewhat conventional. The composition was usually a dark foreground with trees or buildings to right and left, an opening in the middle distance leading into the

background, and a broad expanse of sunset sky. In the foreground he usually introduced a few figures for romantic or classic association. Considerable elevation of theme and spirit marks most of his pictures. There was good workmanship about the skies and the light, and an attentive study of nature was shown throughout. His canvases did not meet with much success at the time they were painted. In more modern days Wilson has been ranked as the true founder of landscape in England, and one of the most sincere of English painters.

THE NORWICH SCHOOL: Old Crome (1769-1821), though influenced to some extent by Wilson and the Dutch painters, was an original talent, painting English scenery with much simplicity and considerable power. He was sometimes rasping with his brush, and had a small method of recording details combined with mannerisms of drawing and composition, and yet gave an out-of-doors feeling in light and air that was astonishing. His large trees have truth of mass and accuracy of drawing, and his foregrounds are painted with solidity. He was a keen student of nature, and drew about him a number of landscape painters at Norwich, who formed the Norwich School. Crome was its leader, and the school made its influence felt upon English landscape painting. Cotman (1782-1842) was the best painter of the group after Crome, a man who depicted landscape and harbor scenes in a style that recalls Girtin and Turner.

The most complete, full-rounded landscapist in England was John Constable (1776-1837). His foreign bias, such as it was, came from a study of the Dutch masters. There were two sources from which the English landscapists drew. Those who were inclined to the ideal, men like Wilson, Calcott (1779-1844), and Turner, drew from the Italian of Poussin and Claude; those who were content to do nature in her real dress, men like Gainsborough and Constable, drew from the Dutch of Hobbema and his contemporaries. A certain sombreness of color and manner of composition show in Constable that may be attributed to Holland; but these were slight features as compared with the originality of the man. He was a close student of nature who painted what he saw in English country life, especially about Hampstead, and painted it with a knowledge and an artistic sensitiveness never surpassed in England. The rural feeling was strong with him, and his evident pleasure in simple scenes is readily communicated to the spectator. There is no attempt at the grand or the heroic. He never cared much for mountains or water, but was fond of cultivated uplands, trees, bowling clouds, and torn skies. Bursts of sunlight, storms, atmospheres, all pleased him. With detail he was little concerned. He saw landscape in large patches of form and color, and so painted it. His handling was broad and solid, and at times a little heavy. His light was often forced by sharp contrast with shadows, and often his pictures appear spotty from isolated glitters of light strewn here and there. In color he helped eliminate the brown landscape and substituted in its place the green and blue of nature. In atmosphere

he was excellent. His influence upon English art was impressive, and in 1824 the exhibition at Paris of his Hay Wain, together with some work by Bonington and Fielding had a decided effect upon the then rising landscape school of France. The French realized that nature lay at the bottom of Constable's art, and they profited, not by imitating Constable, but by studying his nature model.

[Illustration: FIG. 99.--BURNE JONES. FLAMMA VESTALIS.]

Bonington (1801-1828) died young, and though of English parents his training was essentially French, and he really belonged to the French school, an associate of Delacroix. His study of the Venetians turned his talent toward warm coloring, in which he excelled. In landscape his broad handling was somewhat related to that of Constable, and from the fact of their works appearing together in the Salon of 1824 they are often spoken of as influencers of the modern French landscape painters.

Turner (1775-1851) is the best known name in English art. His celebrity is somewhat disproportionate to his real merits, though it is impossible to deny his great ability. He was a man learned in all the forms of nature and schooled in all the formulas of art; yet he was not a profound lover of nature nor a faithful recorder of what things he saw in nature, except in his early days. In the bulk of his work he shows the traditions of Claude, with additions of his own. His taste was classic (he possessed all the knowledge and the belongings of the historical landscape), and he delighted in great stretches of country broken by sea-shores, rivers, high mountains, fine buildings, and illumined by blazing sunlight and gorgeous skies. His composition was at times grotesque in imagination; his light was usually bewildering in intensity and often unrelieved by shadows of sufficient depth; his tone was sometimes faulty; and in color he was not always harmonious, but inclined to be capricious, uneven, showing fondness for arbitrary schemes of color. The object of his work seems to have been to dazzle, to impress with a wilderness of lines and hues, to overawe by imposing scale and grandeur. His paintings are impressive, decoratively splendid, but they often smack of the stage, and are more frequently grandiloquent than grand. His early works, especially in water-colors, where he shows himself a follower of Girtin, are much better than his later canvases in oil, many of which have changed color. The water-colors are carefully done, subdued in color, and true in light. From 1802, or thereabouts, to 1830 was his second period, in which Italian composition and much color were used. The last twenty years of his life he inclined to the _bizarre_, and turned his canvases into almost incoherent color masses. He had an artistic feeling for composition, linear perspective, and the sweep of horizon lines; skies and hills he knew and drew with power; color he comprehended only as decoration; and light he distorted for effect. Yet with all his shortcomings Turner was an artist to be respected and

admired. He knew his craft, in fact, knew it so well that he relied too much on artificial effects, drew away from the model of nature, and finally passed into the extravagant.

THE WATER-COLORISTS: About the beginning of this century a school of water-colorists, founded originally by Cozens (1752-1799) and Girtin (1775-1802), came into prominence and developed English art in a new direction. It began to show with a new force the transparency of skies, the luminosity of shadows, the delicacy and grace of clouds, the brilliancy of light and color. Cozens and Blake were primitives in the use of the medium, but Stothard (1755-1834) employed it with much sentiment, charm, and _plein-air_ effect. Turner was quite a master of it, and his most permanent work was done with it. Later on, when he rather abandoned form to follow color, he also abandoned water-color for oils. Fielding (1787-1849) used water-color effectively in giving large feeling for space and air, and also for fogs and mists; Prout (1783-1852) employed it in architectural drawings of the principal cathedrals of Europe; and Cox (1783-1859), Dewint (1784-1849), Hunt (1790-1864), Cattermole (1800-1868), Lewis (1805-1876), men whose names only can be mentioned, all won recognition with this medium. Water-color drawing is to-day said to be a department of art that expresses the English pictorial feeling better than any other, though this is not an undisputed statement.

[Illustration: FIG. 100.--LEIGHTON. HELEN OF TROY.]

Perhaps the most important movement in English painting of recent times was that which took the name of

PRE-RAPHAELITISM: It was started about 1847, primarily by Rossetti (1828-1882), Holman Hunt (1827-), and Sir John Millais (1829-1896), associated with several sculptors and poets, seven in all. It was an emulation of the sincerity, the loving care, and the scrupulous exactness in truth that characterized the Italian painters before Raphael. Its advocates, including Mr. Ruskin the critic, maintained that after Raphael came that fatal facility in art which seeking grace of composition lost truth of fact, and that the proper course for modern painters was to return to the sincerity and veracity of the early masters. Hence the name pre-Raphaelitism, and the signatures on their early pictures, P. R. B., pre-Raphaelite Brother. To this attempt to gain the true regardless of the sensuous, was added a morbidity of thought mingled with mysticism, a moral and religious pose, and a studied simplicity. Some of the painters of the Brotherhood went even so far as following the habits of the early Italians, seeking retirement from the world and carrying with them a Gothic earnestness of air. There is no doubt about the sincerity that entered into this movement. It was an honest effort to gain the true, the good, and as a result, the beautiful; but it was no less a striven-after honesty and an imitated earnestness. The Brotherhood did

not last for long, the members drifted from each other and began to paint each after his own style, and pre-Raphaelitism passed away as it had arisen, though not without leaving a powerful stamp on English art, especially in decoration.

Rossetti, an Italian by birth though English by adoption, was the type of the Brotherhood. He was more of a poet than a painter, took most of his subjects from Dante, and painted as he wrote, in a mystical romantic spirit. He was always of a retiring disposition and never exhibited publicly after he was twenty-eight years of age. As a draughtsman he was awkward in line and not always true in modelling. In color he was superior to his associates and had considerable decorative feeling. The shortcoming of his art, as with that of the others of the Brotherhood, was that in seeking truth of detail he lost truth of _ensemble_. This is perhaps better exemplified in the works of Holman Hunt. He has spent infinite pains in getting the truth of detail in his pictures, has travelled in the East and painted types, costumes, and scenery in Palestine to gain the historic truths of his Scriptural scenes; but all that he has produced has been little more than a survey, a report, a record of the facts. He has not made a picture. The insistence upon every detail has isolated all the facts and left them isolated in the picture. In seeking the minute truths he has overlooked the great truths of light, air, and setting. His color has always been crude, his values or relations not well preserved, and his brush-work hard and tortured.

Millais showed some of this disjointed effect in his early work when he was a member of the Brotherhood. He did not hold to his early convictions however, and soon abandoned the pre-Raphaelite methods for a more conventional style. He has painted some remarkable portraits and some excellent figure pieces, and to-day holds high rank in English art; but he is an uneven painter, often doing weak, harshly-colored work. Moreover, the English tendency to tell stories with the paint-brush finds in Millais a faithful upholder. At his best he is a strong painter.

Madox Brown (1821-1893) never joined the Brotherhood, though his leaning was toward its principles. He had considerable dramatic power, with which he illustrated historic scenes, and among contemporary artists stood well. The most decided influence of pre-Raphaelitism shows in Burne-Jones (1833-), a pupil of Rossetti, and perhaps the most original painter now living[18] of the English school. From Rossetti he got mysticism, sentiment, poetry, and from association with Swinburne and William Morris, the poets, something of the literary in art, which he has put forth with artistic effect. He has not followed the Brotherhood in its pursuit of absolute truth of fact, but has used facts for decorative effect in line and color. His ability to fill a given space gracefully, shows with fine results in his pictures, as in his stained-glass designs. He is a good

draughtsman and a rather rich colorist, but in brush-work somewhat labored, stippled, and unique in dryness. He is a man of much imagination, and his conceptions, though illustrative of literature, do not suffer thereby, because his treatment does not sacrifice the artistic. He has been the butt of considerable shallow laughter from time to time, like many another man of power. Albert Moore (1840-1893), a graceful painter of a decorative ideal type, rather follows the Rossetti-Burne-Jones example, and is an illustration of the influence of pre-Raphaelitism.

[Footnote 18: Died 1898.]

OTHER FIGURE AND PORTRAIT PAINTERS: Among the contemporary painters Sir Frederick Leighton (1830-1896), President of the Royal Academy, is ranked as a fine academic draughtsman, but not a man with the color-sense or the brushman's quality in his work. Watts (1818-1904) is perhaps an inferior technician, and in color is often sombre and dirty; but he is a man of much imagination, occasionally rises to grandeur in conception, and has painted some superb portraits, notably the one of Walter Crane. Orchardson (1835-) is more of a painter, pure and simple, than any of his contemporaries, and is a knowing if somewhat mannered colorist. Erskine Nicol (1825-), Faed[19] (1826-), Calderon (1833-), Boughton (1834-1905), Frederick Walker (1840-1875), Stanhope Forbes, Stott of Oldham and in portraiture Holl (1845-1890) and Herkomer may be mentioned.

[Footnote 19: Died 1900.]

[Illustration: FIG. 101.--WATTS. LOVE AND DEATH.]

LANDSCAPE AND MARINE PAINTERS: In the department of landscape there are many painters in England of contemporary importance. Vicat Cole (1833-1893) had considerable exaggerated reputation as a depicter of sunsets and twilights; Cecil Lawson (1851-1882) gave promise of great accomplishment, and lived long enough to do some excellent work in the style of the French Rousseau, mingled with an influence from Gainsborough; Alfred Parsons is a little hard and precise in his work, but one of the best of the living men; and W. L. Wyllie is a painter of more than average merit. In marines Hook (1819-) belongs to the older school, and is not entirely satisfactory. The most modern and the best sea-painter in England is Henry Moore (1831-1895), a man who paints well and gives the large feeling of the ocean with fine color qualities. Some other men of mark are Clausen, Brangwyn, Ouless, Steer, Bell, Swan, McTaggart, Sir George Reid.

MODERN SCOTCH SCHOOL: There is at the present time a school of art in Scotland that seems to have little or no affinity with the contemporary school of England. Its painters are more akin to the Dutch and the French, and in their coloring resemble, in depth and

quality, the work of Delacroix. Much of their art is far enough removed from the actual appearance of nature, but it is strong in the sentiment of color and in decorative effect. The school is represented by such men as James Guthrie, E. A. Walton, James Hamilton, George Henry, E. A. Hornel, Lavery, Melville, Crawhall, Roche, Lawson, McBride, Morton, Reid Murray, Spence, Paterson.

PRINCIPAL WORKS: English art cannot be seen to advantage, outside of England. In the Metropolitan Museum, N. Y., and in private collections like that of Mr. William H. Fuller in New York,[20] there are some good examples of the older men--Reynolds, Constable, Gainsborough, and their contemporaries. In the Louvre there are some indifferent Constables and some good Boningtons. In England the best collection is in the National Gallery. Next to this the South Kensington Museum for Constable sketches. Elsewhere the Glasgow, Edinburgh, Liverpool, Windsor galleries, and the private collections of the late Sir Richard Wallace, the Duke of Westminster, and others. Turner is well represented in the National Gallery, though his oils have suffered through time and the use of fugitive pigments. For the living men, their work may be seen in the yearly exhibitions at the Royal Academy and elsewhere. There are comparatively few English pictures in America.

[Footnote 20: Dispersed, 1898.]

PHILADELPHIA'S "BROTHERLY LOVE"

The Project Gutenberg EBook of *Broke*, by Edwin A. Brown

"_Hast thou Virtue? Acquire also the graces and beauties of Virtue._"
--FRANKLIN.

I had read that Philadelphia's hospitality was her great virtue, and that it was characteristic of her people to bestow upon the stranger and the homeless--who are and who come within her gates--a blessing of care and kindness nowhere else known,--to make them feel that at last they have found a haven.

The first Philadelphia police officer I met I asked several questions about the city. His manner toward me was a surprise. He seemed very willing to talk with an apparently homeless man. We spoke of a number of things, among them the Philadelphia Coat of Arms which ornamented

his hat, representing the shield of honor and the scales of Justice. I said, "It is beautiful and stands for a high ideal." He replied doubtfully, "Yes, if it is carried out."

I then strolled down to the corner of Eleventh and Race Streets, and seeing another policeman I approached him with the question:

"Where can a fellow get a free bed?"

He looked at me in surprise.

"I don't know. You might go down to the station house on the next corner. They may give you a bunk."

I walked slowly down to the station house. Was it possible that in that great city of "Brotherly Love," its police could not direct a destitute man or woman, boy or girl, to a place of rest, to a home of shelter,--to be fed and given comfort and good cheer,--except to a jail and behind iron bars?

I entered the station where there were a number of men around the desk. I asked the Captain where a penniless man could get a free bed. He asked,

"Haven't you the price of a bed?"

"No, I have not a penny in my pocket."

"Well, I'll give you a cell," he said, and opened a register to write my name. I asked,

"Is there not a place in the city where a man can work for his supper, bed, and breakfast?"

"None that I know of," was the answer. Then an officer said,

"You can go down to the Galilee Mission."

I asked where it was, and they directed me. Just as I turned to go the policeman nearest to me handed me a dime.

[Illustration: _Municipal Lodging House, New York City
Men's Shower Baths_]

[Illustration: _Municipal Lodging House, New York City
Female Showers and Wash Rooms_]

I started as directed, down to Winter and Darian Streets, to the Galilee Mission. I had proceeded but a short distance when I saw

standing on a corner one of the great army of workers. His appearance told me plainly what he was,--his hands were calloused, and his half-worn shoes were covered with a white viscous substance, and a dim mist of lime dust clouded his entire person. I stepped up to him and asked where I could get a free bed.

"Don't know of such a place in the city, but you can get a bed at the Lombard Street woodyard by working three or four hours for it. But don't go there unless you have to--they won't treat you right."

I thanked him and went on down to the Mission. As I approached it, one of the followers of the Mission, with a Bible or hymn-book under his arm, was at the door in an altercation with one of the great army of unfortunates. The man had an honest face, but the glazed eyes told he had been drinking. I heard the attendant say,

"Now, you get out of here or I'll fix you! I'll have an officer here in a minute, and he'll land you in jail in pretty quick time."

The man was at the drinking faucet at the side of the building.

"I haven't done anything. All I'm doing is getting a drink of water."

What the trouble was, I do not know, but what I saw was a seemingly peaceable man abused, thrown out on the street, with the threat hurled after him of police and prison.

I stepped around to another one of the attendants at the door, and I asked if I could get a free bed there. He said in a hard way, "No, you can't."

"I am willing to work for it."

"Well, I don't know whether there's any left. If there is by half-past nine or ten you can have one, but you understand you'll have to work for it."

I said, "I am not very strong. Will the work be hard?"

"If you're sick why don't you go to the hospital?"

"I'm not sick enough for that."

"Well, I'll tell you one thing, if you get a bed here you'll have to work good and hard for it whether you're sick or well."

"Could I get anything to eat before going to bed?"

"No, you can't," he answered.

I then strolled down to the "Friendly Inn," supposedly a shelter for destitute men, located on Ninth and Walnut Streets. I asked a pleasant looking young man behind the desk if I could get a free bed. He told me they had no free beds nor any work to do to pay for one, but added, "I have no authority, but if you will wait until half-past ten o'clock, the Manager will be here and he may give you one."

Remembering my brief encounter with the workingman on the corner, I did not wait but started for the "Lombard Street woodyard." After reaching Lombard Street I walked for half a mile, and for the entire distance the street was crowded with people, but I did not see a white person until I reached the woodyard. The thrift of the colored people of Philadelphia was markedly noticeable. Saloons were rare in the neighborhood. Their homes were comfortable, they were well dressed and seemingly happy.

I came to a large four-story substantial brick building with a small iron porch at its entrance. There was an iron balcony out from each window and over the entrance door, and on the rear a similar row of balconies, but no fire escape that I could discover. If the building had not been so large it could have been readily taken for a police station, there were so many policemen about the place.

I entered and found myself in the presence, except for the policemen, of the first white man I had seen on Lombard Street. A kindly appearing gentleman asked me a number of questions, and among them if I was sick. My answer apparently satisfactory, he said,

"You will have to work for your lodging here."

I asked, "How long?"

He replied, "Three or four hours."

I was then ordered to take a bath, which was compulsory, and was perfectly right and a good thing. Water, however, does not cost much. After the bath I was shown into a large dormitory, thoroughly ventilated and immaculately clean (made and kept so by homeless workers) containing fifty beds, of which thirty were occupied that night. The beds were very clean and comfortable, except the pillows, which were pretty thin and hard. I judged they were stuffed with cotton, and cotton gets into a lump sometimes. Some of the men coughed all night. At four o'clock, for some reason, one-half of the men were called, and why they were called at that hour I could not learn. At five o'clock the rest of us were called. I had slept in a clean ten-cent bed for six hours, and was then driven out. For the spirit to drive is also evident there. When we went into breakfast there was some bread and spoons on the table. We had no need of a knife and fork,

as we had nothing to use them for. We were then given a plate of bean soup and a cup of stuff called coffee. The soup had a nasty taste, like rancid lard or strong butter, and the material called coffee was luke-warm, and nauseating. It had not the slightest flavor, taste, or strength, and we were not given sugar or milk. This was our breakfast. I could not eat or drink a mouthful, and I was not the only one, for there were others of the half-starved boys and men at that table who ate nothing, and those who did eat forced it down, and made faces while doing so.

Now, this was not because I was used to Bellevue-Stratford fare, for I have roughed it throughout the West in mining and cow camps, and know good coarse food from nasty coarse food.

We then went down in the reading-room, a sort of chapel, where there was a rostrum with an organ and a pulpit on which was a carved cross. The room was filled with chairs. At one end was a large table covered with old magazines and papers. Did you ever notice how charity people think old magazines are good enough for a poor man no matter how bright mentally he may be, or how much he loves to keep up with the times?

We were told we would have to wait until half-past six before going to work. I almost fainted from hunger, and was suffering terribly with a headache. I went down to the door and asked if I could go out, saying I would return. I was told, no, I could not. In this chapel I was virtually imprisoned, to be kept there and turned loose at the will of its superintendent. There were two big well-fed policemen sleeping on the chairs, and I fell to wondering what they were there for, and what they had had for breakfast. I wondered if they were there to watch us, and I said to one boy in a tentative way, "What's the matter of us making a sneak?"

He replied, "No, I won't, for I promised I would work, and if they catch you trying to make a sneak, they'll throw you in jail."

Then I wondered what the large kindly man at the desk, who did not have to wash or scrub floors or saw wood, had had for breakfast, and what the other big good-natured attendant had had, whose only business was to boss the "under dog." I also wondered what the other members of the society of organized charities had had for breakfast, and if they were driven out of bed at four or five o'clock in the morning to eat it.

At six-thirty we were put to work. A number of us were sent to the woodyard and several of us were put to washing, cleaning, and scrubbing the floors and stairs.

I was set to washing, and I asked the "boss" attendant, "How long will I have to work?" He replied, "three or four hours," the same as the attendant had told me at the door when I entered. However, after

working from half-past six until twenty-five minutes to nine--kept in there just at the time when I ought to have been out looking for work--I was allowed to go.

As I was leaving I said to a boy about fifteen years of age, "Are you going now?" He said, referring to the attendant, "He's not told me that I could go. These people treat a boy mighty mean here. They worked me from half-past six yesterday morning until four-thirty in the afternoon."

"Why didn't you leave after you had worked for your bed and breakfast?"

"Well, it was so near dinner time, and I won't beg or steal, so I waited for the cheap dinner, and they worked me, as I told you, until four-thirty in the afternoon, but I am going to try to get a job to-day, if possible."

Does Philadelphia need a Municipal Emergency Home? Philadelphians, you, too, send your delegation to New York and inspect their new Municipal Emergency Home, that you, too, may have one even surpassing that New York Home, or at least turn the one you have into a humane one, for you cannot afford to have New York surpass you in its humanitarian activities. Keep the great reputation you have of "Brotherly Love" and "Hospitality," and if you do, your lives and your city will continue resplendent, and this new refuge will speak in wonderful language the praise of "The City of Homes."

READING BOOKS

The Project Gutenberg EBook of *Hortus Vitae*, by Violet Paget, AKA Vernon Lee

The chief point to be made in this matter is: that books, to fulfil their purpose, do not always require to be read. A book, for instance, which is a present, or an "hommage de l'auteur," has already served its purpose, like a visiting-card or a luggage label, at best like a ceremonial bouquet; and it is absurd to try and make it serve twice over, by reading it. The same applies, of course, to books lent without being asked for, and, in a still higher degree, to a book which has been discussed in society, and thus furnished out a due amount of conversation; to read such a book is an act of pedantry, showing slavishness to the names of things, and lack of insight into their real nature, which is revealed by the function they have been able to perform. Fancy, if public characters had to learn to snuff--a practice happily abandoned--because they occasionally received gifts of enamelled snuffboxes from foreign potentates!

But there are subtler sides to this subject, and it is of these I fain would speak. We are apt to blunt our literary sense by reading far too much, and to lessen our capacity for getting the great delights from books by making reading into a routine and a drudgery. Of course I know that reading books has its utilitarian side, and that we have to consider printed matter (let me never call it literature!) as the raw material whence we extract some of the information necessary to life. But long familiarity with an illiterate peasantry like the Italian one, inclines me to think that we grossly exaggerate the need of such book-grown knowledge. Except as regards scientific facts and the various practices--as medicine, engineering, and the like, founded on them--such knowledge is really very little connected with life, either practical or spiritual, and it is possible to act, to feel, and even to think and to express one's self with propriety and grace, while having simply no literature at all behind one. That this is really no paradox is proved by pointing to the Greeks, who, even in the time of Plato--let alone the time, whenever that was, of Homer--had not much more knowledge of books than my Italian servant, who knows a few scraps of Tasso, possesses a "Book of Dreams; or Key to the Lottery," and uses the literature I have foolishly bestowed upon him as blotters in which to keep loose bills, and wherein occasionally to do addition sums. So that the fact seems to be that reading books is useful chiefly to enable us to wish to read more books!

How many times does one not feel checked, when on the point of lending a book to what we call uneducated persons, by wondering what earthly texture of misapprehension and blanks they will weave out of its allusions and suggestions? And the same is the case of children. What fitter reading for a tall Greek goddess of ten than the tale of Cupid and Psyche, the most perfect of fairy stories with us; wicked sisters, subterranean adventures, ants helping to sort seeds, and terrible awaking drops of hot oil spilt over the bridegroom? But when I read to her this afternoon, shall I not see quite plainly over the edge of the book, that all the things which make it just what it is to me--the indescribable quality of the South, of antiquity and paganism--are utterly missed out; and that, to this divine young nymph, "Cupid and Psyche" is distinguishable from, say, "Beauty and the Beast" only by the unnecessary addition of a lot of heathenish names and the words which she does not even want to understand? Hence literature, alas! is, so to speak, for the literate; and one has to have read a great, great deal in order to taste the special exquisiteness of books, their marvellous essence of long-stored up, oddly mixed, subtly selected and hundredfold distilled suggestion.

But once this state of things reached, there is no need to read much; and every reason for not _keeping up_, as vain and foolish persons boast, "with literature." Since, the time has come, after planting and grafting and dragging watering-pots, for flowering and fruition; for books to do their best, to exert their full magic. This is the time when

a verse, imperfectly remembered, will haunt the memory; and one takes down the book, reads it and what follows, judiciously breaking off, one's mind full of the flavour and scent. Or, again, talking with a friend, a certain passage of prose--the account of the Lambs going to the play when young, or the beginning of "Urn Burial," or a chapter (with due improvised skippings) of "Candide"--comes up in conversation; and one reads it rejoicing with one's friends, feeling the special rapture of united comprehension, of mind touching mind, like the little thrill of voice touching voice on the resolving sevenths of the old duets in thirds. Or even when, remembering some graver page--say the dedication of "Faust" to Goethe's dead contemporaries--one fetches the book and reaches it silently to the other one, not daring to read it out loud.... It is when these things happen that one is really getting the good of books; and that one feels that there really is something astonishing and mysterious in words taken out of the dictionary and arranged with commas and semicolons and full stops between them.

The greatest pleasures of reading consist in re-reading. Sometimes almost in not reading at all, but just thinking or feeling what there is inside the book, or what has come out of it, long ago, and passed into one's mind or heart, as the case may be. I wish to record in this reference a happy week once passed, at vintage time, in the Lower Apennines, with a beautiful copy of "Hippolytus," bound in white, which had been given me, regardless of my ignorance of Greek, by my dear Lombard friend who resembles a faun. I carried it about in my pocket; sometimes, at rare intervals, spelling out some word in _mai_ or in _totos_, and casting a glance on the interleaved crib; but more often letting the volume repose by me on the grass and crushed mint of the cool yard under the fig tree, while the last belated cicala sawed, and the wild bees hummed in the ivy flower of the old villa wall. For once you know the spirit of a book, there is a process (known to Petrarch with reference to Homer, whom he was unable to understand) of taking in its charm by merely turning over the pages, or even, as I say, in carrying it about. The literary essence, which is uncommonly subtle, has various modes of acting on us; and this particular manner of absorbing a book's spirit stands to the material operation called _reading_, much in the same way that _smell_, the act of breathing invisible volatile particles, stands to the more obvious wholesale process of _taste_.

Nay, such is the virtuous power of books, that, to those who are initiated and reverent, it can act from the mere title, or more properly, the binding. Of this I had an instance quite lately in the library of an old Jacobite house on the North Tyne. This library contained, besides its properly embodied books, a small collection existing, so to speak, only in the spirit, or at least in effigy; a door, to wit, being covered with real book-backs, or, more properly, backs of real books of which the inside was missing. A quaint, delightful collection! "Female traits," two volumes; four volumes (what dinners and breakfasts, as well as suppers, of horrors!) of Webster's

"Vittoria Corombona," etc., the "Siege of Mons," "Ancient Mysteries," "The Epigrams of Martial," "A Journey through Italy," and Crébillon's novels. Contemplating these pseudo shelves of pageless tomes, I felt acutely how true it is that a book (for the truly lettered) can do its work without being read. I lingeringly relished (why did not Johnson give us a verb to _saporate_?) this mixed literature's flavour, humorous, romantic, and pedantic, beautifully welded. And I recognized that those gutted-away insides were quite superfluous: they had yielded their essence and their virtue.

BABETA'S DOG

The Project Gutenberg EBook of *Dust of New York*, by Konrad Bercovici

She was only a little puppy when she was brought to Babeta's restaurant. And because Babeta has a literary turn of mind, he renamed her Ophelia when Sonori, the tenor, who knew more about dogs than about literature, said she was a Dane.

It was due to Ophelia that Babeta, the anarchist-communist philosopher, became very much interested in dogdom and learned to distinguish an Airdale from a Bulldog and a Spaniel from a Dane. They ceased talking about music and philosophy at Babeta's, and, though the Goyescas almost created a stir in the musical world and Bergson had delivered a lecture in Rumfold Hall, Babeta and his artist guests neglected such transcendental interests because of the change brought about in the direction of their thoughts by a dog, because of a little puppy they had named Ophelia.

Sonori discovered that Shakespeare, and not Verdi, was the author of "The Moor of Venice," and when the talk turned about the Scandinavians, many another musical celebrity heard for the first time the name of Ibsen or of Bjornson. And there was even a lonely man in the crowd who had read a story by Knut Hamsun, that greatest of all Scandinavian writers, whose tales have no equal in the world's literature.

In what strange surroundings Ophelia was destined to live!

Near Eighth Avenue, before Fortieth Street. The smell of garlic and tomato sauce warns the passer-by that the inhabitants are from Piedmonte, but on the street one hears the Irish brogue. The bales of cotton in front of the warehouses and the smoke from the chimneys reek after Liverpool, but the smell of rope, tar and fried smelts that comes from the wharves near by remind one of Fiume and Marseille, as the swaying masts and the spread-out sails outline themselves against the

glowing sky.

And in such surroundings, back of one of the numerous saloons in which stale beer is served to drunken sailors and dust-covered longshoremen, is the celebrated restaurant of Babeta.

I have said already that Babeta is a philosopher, and were I to write about him and not about his dog, I could tell you some good stories about the interminable scientific discussions at a certain table in a corner, and the marvelous feasts at the tables reserved there for the two thousand dollar a night tenors and three thousand dollar a week sopranos. A book could be written about the decorations and friezes of the place, and only ignorance of culinary art would put a stop to what I could say about the food served at Babeta's. As to the wine--well, it's Chianti or Lacrima Christi, if that means anything to you.

But I have promised Prosper to tell the story of Ophelia. Prosper knows a lot about science and still more about art, but, because he is neither scientist nor artist, he is interested in human beings and dogs.

We all admired Ophelia. She was gliding graciously between the tables, and as she grew bigger she was frequently a medium of friendship between old and new guests. Hands met hands stroking her beautiful fur, and after an "excuse me," or a "pardon, signorina," the new guest asked the old one the name of the dog--followed an introduction, an invitation to the other table, after which Ophelia was slightly forgotten and Dante or Puccini was discussed for a little while. But Ophelia's steady place was near Babeta's table at the door.

In less than a year Ophelia was the personality of the place. She was big and stately. Her short morning walk was taken on the leash, one end of which was in her master's hand. Any casual courtesy paid to her by another dog during those walks was firmly and instantly checked by Babeta. She was a Dane, a pure blue Dane, and Babeta, the anarchist, the enemy of aristocracy, did not allow his dog to meet the common people, the free, common people of dogdom. Ophelia pulled at the leash once or twice, but, after severe reprimands, she made a virtue of necessity and passed haughtily by unobservant of any amorous advances.

It was Prosper who brought the great news. Ophelia was to be mated to a pure Dane owned by a captain, who promised to bring "Prince" on his next trip from Europe. And the news spread. People that had neglected the spaghetti and Chianti for weeks suddenly got a hankering after Babeta's place. Ere the week was over the unborn puppies were promised to two hundred people. Babeta had been shown the pedigree of Prince and was satisfied on this score.

I have already said that Ophelia was the personality of the place, but after Babeta told the story of her future mate, and promised pups to

all that would listen to him, she became the most venerated personality. Sopranos with two hemispheres at their feet fed Ophelia the best sweets of the continent, and a justly celebrated baritone brought her a collar of pure silver, lined with costly fur. Nothing was too good for Ophelia, nothing too expensive for her.

From the river, a few hundred feet away, came the fog blasts of transport ships carrying thousands of men to a vortex of blood in which millions of men had already been crushed, pulverized and liquified to check the rule of aristocracy, but back of that saloon near Eighth Avenue, Babeta, the anarchist-communist philosopher, was expounding the virtues of pure blood as exemplified in Ophelia and Prince, the Dane to which she was to be mated.

Many were the bottles of wine drunk to her health and the health of her offspring. Babeta actually experienced the joys of fatherhood when he made arrangements with a veterinarian, the best in town, for the great day. In the most comfortable corner of the kitchen a place was reserved for Ophelia's litter. A new soft mattress and warm woolen covers were prepared and only the privileged ones were shown all those preparations.

"I want a male puppy," said Sonori, "because I want to call it Hamlet."

"And I want a female one and I will call it Flora," said Mlle. Marienta, the great lyric soprano.

Babeta was happy. Thanks to his dog, he had obtained higgedly-piggedly more flattery than he ever craved for his famous food or for his philosophical discourses.

"Ophelia, you good girl, come for a walk," and master and dog went early every morning to breathe fresh air.

But spring was near. As the days went by it seemed to Babeta that Ophelia was gradually losing her haughtiness towards the common people, ordinarily along the wharves.

The hundred and one mongrel dogs roving there followed Ophelia and her master and she pulled at the leash with more insistence from day to day. Once she allowed one of the dogs to come so near that Babeta felt the fangs of the mongrel as he drove him away with a kick. And Ophelia stood meekly by. Homewards she bent her head in shame as the master censored her.

"Shame, Ophelia."

Ophelia was ashamed. She nestled close to Babeta as he sat down to bandage his leg and looked up to him and whined. Only when the whining threatened to turn into a howl did Babeta give a forgiving sign. The

following days the morning walks were taken along the avenue; the leash was brought up shorter, as a precaution, and all was peaceful again. But during the day Ophelia showed signs of uneasiness, and Babeta watched the door because she tried twice to slink out.

"What's the matter with Ophelia? She has refused chocolate!" asked one of the guests.

"She has probably had enough sweets," answered Babeta offhandedly, but his heart sunk.

A few days later, a street dog slunk in through the door of the restaurant. Ophelia got up from her corner to meet the stranger. Her master sprung up and kicked the intruder so violently the dog's howl could be heard from the street.

"You treat the common people pretty roughly, Babeta!" observed Prosper.

Babeta was angry with Ophelia.

"Shame," he cried, "shame," and drove her to the kitchen. "Away from me, away."

In vain Ophelia tried to make up to him. Her eyes begged forgiveness. But when it was not given she turned about and barked and howled in righteous indignation as it just occurred to her that she was unjustly treated.

"Wherein have I sinned?" she seemed to question.

Sonori and others wanted to pat her, but she gave fair warning by snarling and snapping in the air.

"What's the trouble with Ophelia?" Sonori asked.

"To the kitchen, go, go," and Babeta pushed her away.

That night, after the guests were all gone, the master spoke to the dog.

"I am ashamed of you, Ophelia. You behaved miserably. You a pure Dane to permit and accept the courtship of a low down street dog!--I am ashamed of you! Prince will soon come from Europe, and you want to associate with nondescripts that feed from garbage cans!"

Ophelia cried and whined and begged forgiveness, and was happy again only when Babeta allowed her to take the nightly piece of sugar from between his lips.

Yet Ophelia felt the misery of aristocratic loneliness. That streak of

the dark blue sky she saw between the shutters at night and the snarling, howling and fighting of the dogs at the wharves caused her sleepless nights. It was early spring; the time when life asserts itself; when dog and man howls to the moon and snaps at each falling star.

That dog Babeta had kicked out so violently from the restaurant came nightly under the window of his belle and called, begged, serenaded and pleaded in even more heartrending tones than the tenor in Bizet's "Pecheur des Perles." And it was Prosper again who brought the astonishing news "Ophelia was stolen!"

It was Babeta's version of what had happened. The lattices of the shutters were smashed, the window broken and the dog gone. Babeta was the most disconsolate of men.

"Put in an ad and offer a reward. Announce to the police. Go to the depot of S. P. C. A."

Such were the advices. But he cared not. He remembered the pulling at the leash, the meeting on the wharf, the dog he kicked out, and he despaired. He had promised pure blue puppies. He had been so good to Ophelia. He had given her the best there was to be had. But she left him, ran away like a thief in the dead of night.

Babeta could not touch any food the whole day. That night, when the tenors and sopranos came to eat, they cried and mourned the great loss.

"Dio, mio, oh. Dio, mio!" they all groaned.

Babeta found Ophelia the following morning. He recognized her from a distance. His attention was drawn to a pack of dogs fighting over something or other. There were two different groups, and Ophelia, not definitely attached to either of them, was keeping on the outskirts of the skirmish, snapping and snarling at individuals of both parties. Oh, what a glorious free time she had! Her wriggling tail expressed the joy of life and its mastery. They were all afraid of her. She was stronger than any of them, and she was so happy--so happy and free!

"Ophelia!" rang Babeta's voice. The dog turned about and, seeing the master, she started in the opposite direction, tail between hind legs and head down.

"Ophelia!" he called again. She took a few steps toward him, and as he approached nearer she laid down in the mud, closed her eyes and turned her head aside. Babeta had not taken the leash along, but he held on to the silver collar to bring her home.

Babeta hoped against hope that he would still be able to give pure Dane

pups to his friends, but in a few weeks the shame could no longer be hidden. He opened his heart to every one and told where he had found her and in what company. The guests who had patted her and fed her the best sweets no longer looked at her. She was pushed away from near the table. With bowed head she nestled close to her master, her sole protector and friend, but he repulsed her. He did not understand. He did not sympathize.

"Fui, fui, get away, shameless creature, to the kitchen."

The ones that were promised pups became harsh to her and everybody scolded. And one of them remarked:

"Look, she is eating from the floor."

It was the most evident sign of her downfall. Before her escapade she had never eaten but what was given to her in a plate; and never the rests from the tables, but food especially prepared for her by Babeta himself.

"Shame," they all yelled, "shame, shame."

When she lifted her pleading head to her master, Babeta, in a fit of anger, spat at it. "Fui, fui!"

In vain she waited for forgiveness. She longed for the nightly piece of sugar from the lips of her master. She stretched her neck when he passed her by in his inspection of the kitchen. But he did not even look at her. What terrible thing had she done! If he were willing to forgive her she would feel as guilty as he wanted, but since he was so harsh and insulting she felt only his cruelty and not her shame.

Outside her friend was serenading again. The door was not even closed. The master no longer cared with whom she associated. Among humans no friend was left--she understood that--the door was wide open. She could do as she pleased. She had lost her master. He will only scold and never pat again. She understood that, too.

* * * * *

"Where is Ophelia?" Sonori asked the next evening.

"She has run away and committed suicide!" Babeta announced. "Actually committed suicide. She understood she was disgraced. I called and called, but she ran away--she surely committed suicide!" and he was flattered that Ophelia cared enough for him to commit suicide because she had lost his friendship. Only Prosper knows.

"She has gone to the dogs," he said. "The day of aristocracy is over.

It's the people now. You are either with them; howling, fighting, getting ruffled and bitten, or you have to isolate yourself on an island at the mercy of much worse--like that other great aristocrat--and Ophelia understood and made her choice."

* * * * *

At Babeta's table they talk again about molecular physics, phonolites, christalloids, music and art.

Dogs and Scandinavian literature are taboo. And every time Prosper enters the place Babeta feels uneasy, as though he owes him an explanation.

Recipe from The Project Gutenberg EBook of *Better Meals for Less Money,* by Mary Green

317.--CHEESE BALLS

1-1/2 cups cheese cut fine	1/4 teaspoon mustard
1 tablespoon flour	1/4 teaspoon paprika
1/4 teaspoon salt	Whites of 2 eggs beaten stiff

Mix in order given, shape in balls about one inch in diameter, roll in sifted crumbs, and fry in deep fat until brown. Drain on soft paper, and serve hot. Serve with the salad course or as a savory.

Recipe from The Project Gutenberg EBook of *Made-Over Dishes*, by S. T. Rorer

CHEESE BALLS

Grate or chop sufficient common cheese to make a half pint; add to it one pint of stale bread crumbs, a half teaspoonful of salt, a dash of red pepper and the whites of two eggs slightly beaten. Form these into small balls the size of an English walnut; dip in egg and then in bread crumbs and fry in smoking hot fat. These may also be made into small cylinder-shaped croquettes, and served with cream sauce.

Recipes from The Project Gutenberg EBook of *Cassell's Vegetarian Cookery*, by A. G. Payne

EGG, FORCEMEAT OF, OR **EGG BALLS.**--Take three hard-boiled yolks of eggs, powder them, mix in a raw yolk, add a little pepper and salt, a small

quantity of grated nutmeg, about a saltspoonful of finely chopped parsley, chopped up with a pinch of savoury herbs, or a pinch of dust from bottled savoury herbs, sifted from them, may be added instead. Roll these into balls not bigger than a very small marble, flour them, and throw them into boiling water till they are set.

In many parts of the Continent, hard-boiled yolks of eggs, served whole, are used as egg balls. A much cheaper way of making egg balls is as follows:--Beat up one egg, add a teaspoonful of chopped blanched parsley, some pepper and salt, and a very little grated nutmeg. Sift a bottle of ordinary mixed savoury herbs in a sieve, and take about half a saltspoonful of the dust and mix this with the egg, This will be found really better than using the herbs themselves. Now make some very fine bread-crumbs from _stale_ bread, and mix this with the beaten-up egg till you make a sort of soft paste or dough; roll this into balls the size of a marble, flour them, and throw them into boiling water. The balls must be small or they will split in boiling.

POTATO BALLS.--Mash some boiled potatoes with a little butter, pepper, salt, chopped parsley, chopped onion, or still better, shallot, and add a few savoury herbs. Mix up one or two or more well-beaten eggs, according to the quantity of potato, roll the mixture into balls, flour them, and fry them a nice brown colour, and serve.

CHEESE BALLS

Take mashed cream cheese--add butter, cream and a little paprika. You can chop either green peppers, almonds or olives in this mixture, or the juice of an onion. Roll into small balls and serve on lettuce leaves. This is also very good for sandwiches.

BOILED FLOUR BALLS WITH ALMONDS

Two yolks of eggs beaten very light, add a pinch of salt, pepper and finely-chopped parsley. Add six blanched almonds grated, enough sifted flour to make stiff batter, then add the stiffly-beaten whites of eggs and one-half teaspoon of baking powder. Drop by teaspoons in soup ten minutes before serving.

COD FISH BALLS

Put the fish to soak over night in lukewarm water. Change again in the morning and wash off all the salt. Cut into pieces and boil about fifteen minutes, pour off this water and put on to boil again with boiling water. Boil twenty minutes this time, drain off every bit of water, put on a platter to cool and pick to pieces as fine as possible, removing every bit of skin and bone. When this is done, add an equal quantity of mashed potatoes, a tablespoon of butter, a very little salt and pepper, beat up one egg and a little milk, if necessary, mix with a fork. Flour your hands well and form into biscuit-shaped balls. Fry in hot oil.

POTATO BALLS WITH PARSLEY

Pare very thin, medium potatoes as near a size as possible. Have ready a pot of boiling water, salted, drop in the potatoes and keep them at a quick boil until tender. Serve with a batter made by beating to a cream two tablespoons of butter, one-half tablespoon of lemon juice and one tablespoon of finely minced parsley; add salt and a dash of cayenne pepper; spread over the hot potatoes, and it will melt into a delicious dressing. This is especially nice to serve with fish.

SNOWBALLS (HESTERLISTE)

Mix one teaspoon of butter, one-fourth teaspoon of salt, one tablespoon of sugar with one egg. Add one tablespoon of cream, one teaspoon of brandy and flour to make stiff dough. Work the whole together with a spoon until the flour is incorporated with the other ingredients and you have a dough easily handled. Break the dough in pieces about the size of a walnut; roll each piece out separately just as thin as possible without tearing (the thinner the better), make three lengthwise slashes in the centre of each piece of dough after rolling out.

Heat a large deep skillet about half full with boiling hot butter or Crisco, drop in the snowballs, not more than three at one time, brown quickly on one side, then on the other, turn carefully with a perforated skimmer as they are easily broken. Remove to a platter, sprinkle with powdered sugar and cinnamon and a few drops of lemon juice.

THE BEARER OF BURDENS

The Project Gutenberg eBook, *Ghetto Comedies*, by Israel Zangwill,

I

When her Fanny did at last marry, Natalya--as everybody called the old clo'-woman--was not over-pleased at the bargain. Natalya had imagined beforehand that for a matronly daughter of twenty-three, almost past the marrying age, any wedding would be a profitable transaction. But when a husband actually presented himself, all the old dealer's critical maternity was set a-bristle. Henry Elkman, she insisted, had not a true Jewish air. There was in the very cut of his clothes a subtle suggestion of going to the races.

It was futile of Fanny to insist that Henry had never gone to the races, that his duties as bookkeeper of S. Cohn's Clothing Emporium prevented him from going to the races, and that the cut of his clothes was intended to give tone to his own establishment.

'Ah, yes, he does not take _thee_ to the races,' she insisted in Yiddish. 'But all these young men with check suits and flowers in their buttonholes bet and gamble and go to the bad, and their wives and children fall back on their old mothers for support.'

'I shall not fall back on thee,' Fanny retorted angrily.

'And on whom else? A pretty daughter! Would you fall back on a stranger? Or perhaps you are thinking of the Board of Guardians!' And a shudder of humiliation traversed her meagre frame. For at sixty she was already meagre, had already the appearance of the venerable grandmother she was now to become, save that her hair, being only a pious wig, remained rigidly young and black. Life had always gone hard with her. Since her husband's death, when Fanny was a child, she had scraped together a scanty livelihood by selling odds and ends for a mite more than she gave for them. At the back doors of villas she haggled with miserly mistresses, gentlewoman and old-clo' woman linked by their common love of a bargain.

Natalya would sniff contemptuously at the muddle of ancient finery on the floor and spurn it with her foot. 'How can I sell that?' she would inquire. 'Last time I gave you too much--I lost by you.' And having wrung the price down to the lowest penny, she would pay it in clanking silver and copper from a grimy leather bag she wore hidden in her bosom; then, cramming the goods hastily into the maw of her sack, she would stagger joyously away. The men's garments she would modestly sell to a second-hand shop, but the women's she cleaned and turned and transmogrified and sold in Petticoat Lane of a Sunday morning; scavenger, earth-worm, and alchemist, she was a humble agent in the

great economic process by which cast-off clothes renew their youth and freshness, and having set in their original sphere rise endlessly on other social horizons.

Of English she had, when she began, only enough to bargain with; but in one year of forced intercourse with English folk after her husband's death she learnt more than in her quarter of a century of residence in the Spitalfields Ghetto.

Fanny's function had been to keep house and prepare the evening meal, but the old clo'-woman's objection to her marriage was not selfish. She was quite ready to light her own fire and broil her own bloater after the day's tramp. Fanny had, indeed, offered to have her live in the elegant two-roomed cottage near King's Cross which Henry was furnishing. She could sleep in a convertible bureau in the parlour. But the old woman's independent spirit and her mistrust of her son-in-law made her prefer the humble Ghetto garret. Against all reasoning, she continued to feel something antipathetic in Henry's clothes and even in his occupation--perhaps it was really the subconscious antagonism of the old clo' and the new, subtly symbolic of the old generation and the smart new world springing up to tread it down. Henry himself was secretly pleased at her refusal. In the first ardours of courtship he had consented to swallow even the Polish crone who had strangely mothered his buxom British Fanny, but for his own part he had a responsive horror of old clo'; felt himself of the great English world of fashion and taste, intimately linked with the burly Britons whose girths he recorded from his high stool at his glass-environed desk, and in touch even with the _lion comique_, the details of whose cheap but stylish evening dress he entered with a proud flourish.

II

The years went by, and it looked as if the old woman's instinct were awry. Henry did not go to the races, nor did Fanny have to fall back on her mother-in-law for the maintenance of herself and her two children, Becky and Joseph. On the contrary, she doubled her position in the social scale by taking a four-roomed house in the Holloway Road. Its proximity to the Clothing Emporium enabled Henry to come home for lunch. But, alas! Fanny was not allowed many years of enjoyment of these grandeurs and comforts. The one-roomed grave took her, leaving the four-roomed house incredibly large and empty. Even Natalya's Ghetto garret, which Fanny had not shared for seven years, seemed cold and vacant to the poor mother. A new loneliness fell upon her, not mitigated by ever rarer visits to her grandchildren. Devoid of the link of her daughter, the house seemed immeasurably aloof from her in the social scale. Henry was frigid and the little ones went with marked reluctance to this stern, forbidding old woman who

questioned them as to their prayers and smelt of red-herrings. She ceased to go to the house.

And then at last all her smouldering distrust of Henry Elkman found overwhelming justification.

Before the year of mourning was up, before he was entitled to cease saying the _Kaddish_ (funeral hymn) for her darling Fanny, the wretch, she heard, was married again. And married--villainy upon villainy, horror upon horror--to a Christian girl, a heathen abomination. Natalya was wrestling with her over-full sack when she got the news from a gossiping lady client, and she was boring holes for the passage of string to tie up its mouth. She turned the knife viciously, as if it were in Henry Elkman's heart.

She did not know the details of the piquant, tender courtship between him and the pretty assistant at the great drapery store that neighboured the Holloway Clothing Emporium, any more than she understood the gradual process which had sapped Henry's instinct of racial isolation, or how he had passed from admiration of British ways into entire abandonment of Jewish. She was spared, too, the knowledge that latterly her own Fanny had slid with him into the facile paths of impiety; that they had ridden for a breath of country air on Sabbath afternoons. They had been considerate enough to hide that from her. To the old clo'-woman's crude mind, Henry Elkman existed as a monster of ready-made wickedness, and she believed even that he had been married in church and baptized, despite that her informant tried to console her with the assurance that the knot had been tied in a Registrar's office.

'May he be cursed with the boils of Pharaoh!' she cried in her picturesque jargon. 'May his fine clothes fall from his flesh and his flesh from his bones! May my Fanny's outraged soul plead against him at the Judgment Bar! And she--this heathen female--may her death be sudden!' And she drew the ends of the string tightly together, as though round the female's neck.

'Hush, you old witch!' cried the gossip, revolted; 'and what would become of your own grandchildren?'

'They cannot be worse off than they are now, with a heathen in the house. All their Judaism will become corrupted. She may even baptize them. Oh, Father in Heaven!'

The thought weighed upon her. She pictured the innocent Becky and Joseph kissing crucifixes. At the best there would be no _kosher_ food in the house any more. How could this stranger understand the mysteries of purging meat, of separating meat-plates from butter-plates?

At last she could bear the weight no longer. She took the Elkman house in her rounds, and, bent under her sack, knocked at the familiar door. It was lunch-time, and unfamiliar culinary smells seemed wafted along the passage. Her morbid imagination scented bacon. The orthodox amulet on the doorpost did not comfort her; it had been left there, forgotten, a mute symbol of the Jewish past.

A pleasant young woman with blue eyes and fresh-coloured cheeks opened the door.

The blood surged to Natalya's eyes, so that she could hardly see.

'Old clo',' she said mechanically.

'No, thank you,' replied the young woman. Her voice was sweet, but it sounded to Natalya like the voice of Lilith, stealer of new-born children. Her rosy cheek seemed smeared with seductive paint. In the background glistened the dual crockery of the erst pious kitchen which the new-comer profaned. And between Natalya and it, between Natalya and her grandchildren, this alien girlish figure seemed to stand barrier-wise. She could not cross the threshold without explanations.

'Is Mr. Elkman at home?' she asked.

'You know the name!' said the young woman, a little surprised.

'Yes, I have been here a good deal.' The old woman's sardonic accent was lost on the listener.

'I am sorry there is nothing this time,' she replied.

'Not even a pair of old shoes?'

'No.'

'But the dead woman's----? Are you, then, standing in them?'

The words were so fierce and unexpected, the crone's eyes blazed so weirdly, that the new wife recoiled with a little shriek.

'Henry!' she cried.

Fork in hand, he darted in from the living-room, but came to a sudden standstill.

'What do you want here?' he muttered.

'Fanny's shoes!' she cried.

'Who is it?' his wife's eyes demanded.

'A half-witted creature we deal with out of charity,' he gestured back. And he put her inside the room-door, whispering, 'Let me get rid of her.'

'So, that's your painted poppet,' hissed his mother-in-law in Yiddish.

'Painted?' he said angrily. 'Madge painted? She's just as natural as a rosy apple. She's a country girl, and her mother was a lady.'

'Her mother? Perhaps! But she? You see a glossy high hat marked sixteen and sixpence, and you think it's new. But I know what it's come from--a battered thing that has rolled in the gutter. Ah, how she could have bewitched you, when there are so many honest Jewesses without husbands!

'I am sorry she doesn't please you; but, after all, it's my business, and not yours.'

'Not mine? After I gave you my Fanny, and she slaved for you and bore you children?'

'It's just for her children that I had to marry.'

'What? You had to marry a Christian for the sake of Fanny's children? Oh, God forgive you!'

'We are not in Poland now,' he said sulkily.

'Ah, I always said you were a sinner in Israel. My Fanny has been taken for your sins. A black death on your bones.'

'If you don't leave off cursing, I shall call a policeman.'

'Oh, lock me up, lock me up--instead of your shame. Let the whole world know that.'

'Go away, then. You have no right to come here and frighten Madge--my wife. She is in delicate health, as it is.'

'May she be an atonement for all of us! I have the right to come here as much as I please.'

'You have no right.'

'I have a right to the children. My blood is in their veins.'

'You have no right. The children are their father's.'

'Yes, their Father's in heaven,' and she raised her hand like an ancient prophetess, while the other supported her bag over her shoulder. 'The children are the children of Israel, and they must carry forward the yoke of the Law.'

'And what do you propose?' he said, with a scornful sniff.

'Give me the children. I will elevate them in the fear of the Lord. You go your own godless way, free of burdens--you and your Christian poppet. You no longer belong to us. Give me the children, and I'll go away.'

He looked at her quizzingly. 'You have been drinking, my good mother-in-law.'

'Ay, the waters of affliction. Give me the children.'

'But they won't go with you. They love their step-mother.'

'Love that painted jade? They, with Jewish blood warm in their veins, with the memory of their mother warm in their hearts? Impossible!'

He opened the door gently. 'Becky! Joe! No, don't you come, Madge, darling. It's all right. The old lady wants to say "Good-day" to the children.'

The two children tripped into the passage, with napkins tied round their chins, their mouths greasy, but the rest of their persons unfamiliarly speckless and tidy. They stood still at the sight of their grandmother, so stern and frowning. Henry shut the door carefully.

'My lambs!' Natalya cried, in her sweetest but harsh tones, 'Won't you come and kiss me?'

Becky, a mature person of seven, advanced courageously and surrendered her cheek to her grandmother.

'How are you, granny?' she said ceremoniously.

'And Joseph?' said Natalya, not replying. 'My heart and my crown, will he not come?'

The four-and-a-half year old Joseph stood dubiously, with his fist in his mouth.

'Bring him to me, Becky. Tell him I want you and him to come and live

with me.'

Becky shrugged her precocious shoulders. 'He may. I won't,' she said laconically.

'Oh, Becky!' said the grandmother. 'Do you want to stay here and torture your poor mother?'

Becky stared. 'She's dead,' she said.

'Yes, but her soul lives and watches over you. Come, Joseph, apple of my eye, come with me.'

She beckoned enticingly, but the little boy, imagining the invitation was to enter her bag and be literally carried away therein, set up a terrific howl. Thereupon the pretty young woman emerged hastily, and the child, with a great sob of love and confidence, ran to her and nestled in her arms.

'Mamma, mamma,' he cried.

Henry looked at the old woman with a triumphant smile.

Natalya went hot and cold. It was not only that little Joseph had gone to this creature. It was not even that he had accepted her maternity. It was this word 'mamma' that stung. The word summed up all the blasphemous foreignness of the new domesticity. 'Mamma' was redolent of cold Christian houses in whose doorways the old clo'-woman sometimes heard it. Fanny had been 'mother'--the dear, homely, Jewish 'mother.' This 'mamma,' taught to the orphans, was like the haughty parade of Christian elegance across her grave.

'When _mamma's_ shoes are to be sold, don't forget me,' Natalya hissed. 'I'll give you the best price in the market.'

Henry shuddered, but replied, half pushing her outside: 'Certainly, certainly. Good-afternoon.'

'I'll buy them at your own price--ah, I see them coming, coming into my bag.'

The door closed on her grotesque sibylline intensity, and Henry clasped his wife tremblingly to his bosom and pressed a long kiss upon her fragrant cherry lips.

Later on he explained that the crazy old clo'-woman was known to the children, as to everyone in the neighbourhood, as 'Granny.'

III

In the bearing of her first child the second Mrs. Elkman died. The rosy face became a white angelic mask, the dainty figure lay in statuesque severity, and a screaming, bald-headed atom of humanity was the compensation for this silence. Henry Elkman was overwhelmed by grief and superstition.

'For three things women die in childbirth,' kept humming in his brain from his ancient Hebrew lore. He did not remember what they were, except that one was the omission of the wife to throw into the fire the lump of dough from the Sabbath bread. But these neglects could not be visited on a Christian, he thought dully. The only distraction of his grief was the infant's pressing demand on his attention.

It was some days before the news penetrated to the old woman.

'It is his punishment,' she said with solemn satisfaction. 'Now my Fanny's spirit will rest.'

But she did not gloat over the decree of the God of Israel as she had imagined beforehand, nor did she call for the dead woman's old clo'. She was simply content--an unrighteous universe had been set straight again like a mended watch. But she did call, without her bag, to inquire if she could be of service in this tragic crisis.

'Out of my sight, you and your evil eye!' cried Henry as he banged the door in her face.

Natalya burst into tears, torn by a chaos of emotions. So she was still to be shut out.

IV

The next news that leaked into Natalya's wizened ear was as startling as Madge's death. Henry had married again. Doubtless with the same pretext of the children's needs he had taken unto himself a third wife, and again without the decencies of adequate delay. And this wife was a Jewess, as of yore. Henry had reverted matrimonially to the fold. Was it conscience, was it terror? Nobody knew. But everybody knew that the third Mrs. Elkman was a bouncing beauty of a good orthodox stock, that she brought with her fifty pounds in cash, besides bedding and house-linen accumulated by her parents without prevision that she would marry an old hand, already provided with these household elements.

The old clo'-woman's emotions were more mingled than ever. She felt vaguely that the Jewish minister should not so unquestioningly have

accorded the scamp the privileges of the hymeneal canopy. Some lustral rite seemed necessary to purify him of his Christian conjunction. And the memory of Fanny was still outraged by this burying of her, so to speak, under layers of successive wives. On the other hand, the children would revert to Judaism, and they would have a Jewish mother, not a mamma, to care for them and to love them. The thought consoled her for being shut out of their lives, as she felt she must have been, even had Henry been friendlier. This third wife had alienated her from the household, had made her kinship practically remote. She had sunk to a sort of third cousin, or a mother-in-law twice removed.

The days went on, and again the Elkman household occupied the gossips, and news of it--second-hand, like everything that came to her--was picked up by Natalya on her rounds. Henry's third wife was, it transpired, a melancholy failure. Her temper was frightful, she beat her step-children, and--worst and rarest sin in the Jewish housewife--she drank. Henry was said to be in despair.

'_Nebbich_, the poor little children!' cried Natalya, horrified. Her brain began plotting how to interfere, but she could find no way.

The weeks passed, with gathering rumours of the iniquities of the third Mrs. Elkman, and then at last came the thunder-clap--Henry had disappeared without leaving a trace. The wicked wife and the innocent brats had the four-roomed home to themselves. The Clothing Emporium knew him no more. Some whispered suicide, others America. Benjamin Beckenstein, the cutter of the Emporium, who favoured the latter hypothesis reported a significant saying: 'I have lived with two angels; I can't live with a demon.'

'Ah, at last he sees my Fanny was an angel,' said Natalya, neglecting to draw the deduction anent America, and passing over the other angel. And she embroidered the theme. How indeed could a man who had known the blessing of a sober, God-fearing wife endure a drunkard and a child-beater? 'No wonder he killed himself!'

The gossips pointed out that the saying implied flight rather than suicide.

'You are right!' Natalya admitted illogically. 'Just what a coward and blackguard like that would do--leave the children at the mercy of the woman he couldn't face himself. How in Heaven's name will they live?'

'Oh, her father, the furrier, will have to look after them,' the gossips assured her. 'He gave her good money, you know, fifty pounds and the bedding. Ah, trust Elkman for that. He knew he wasn't leaving the children to starve.'

'I don't know so much,' said the old woman, shaking her bewigged head.

What was to be done? Suppose the furrier refused the burden. But Henry's flight, she felt, had removed her even farther from the Elkman household. If she went to spy out the land, she would now have to face the virago in possession. But no! on second thoughts it was this other woman whom Henry's flight had changed to a stranger. What had the wretch to do with the children? She was a mere intruder in the house. Out with her, or at least out with the children.

Yes, she would go boldly there and demand them. 'Poor Becky! Poor Joseph!' her heart wailed. 'You to be beaten and neglected after having known the love of a mother.' True, it would not be easy to support them. But a little more haggling, a little more tramping, a little more mending, and a little less gorging and gormandising! They would be at school during the day, so would not interfere with her rounds, and in the evening she could have them with her as she sat refurbishing the purchases of the day. Ah, what a blessed release from the burden of loneliness, heavier than the heaviest sack! It was well worth the price. And then at bedtime she would say the Hebrew night-prayer with them and tuck them up, just as she had once done with her Fanny.

But how if the woman refused to yield them up--as Natalya could fancy her refusing--out of sheer temper and devilry? What if, amply subsidized by her well-to-do parent, she wished to keep the little ones by her and revenge upon them their father's desertion, or hold them hostages for his return? Why, then, Natalya would use cunning--ay, and force, too--she would even kidnap them. Once in their grandmother's hands, the law would see to it that they did not go back to this stranger, this bibulous brute, whose rights over them were nil.

It was while buying up on a Sunday afternoon the sloughed vestments of a Jewish family in Holloway that her resolve came to a head. A cab would be necessary to carry her goods to her distant garret. What an opportunity for carrying off the children at the same time! The house was actually on her homeward route. The economy of it tickled her, made her overestimate the chances of capture. As she packed the motley, far-spreading heap into the symmetry of her sack, pressing and squeezing the clothes incredibly tighter and tighter till it seemed a magic sack that could swallow up even the Holloway Clothing Emporium, Natalya's brain revolved feverish fancy-pictures of the coming adventure.

Leaving the bag in the basement passage, she ran to fetch a cab. Usually the hiring of the vehicle occupied Natalya half an hour. She would harangue the Christian cabmen on the rank, pleading her poverty, and begging to be conveyed with her goods for a ridiculous sum. At first none of them would take notice of the old Jewish crone, but

would read their papers in contemptuous indifference. But gradually, as they remained idly on the rank, the endless stream of persuasion would begin to percolate, and at last one would relent, half out of pity, and would end by bearing the sack gratuitously on his shoulder from the house to his cab. Often there were two sacks, quite filling the interior of a four-wheeler, and then Natalya would ride triumphantly beside her cabby on the box, the two already the best of friends. Things went ill if Natalya did not end by trading off something in the sacks against the fare--at a new profit.

But to-day she was too excited to strike more than a mediocre bargain. The cumbrous sack was hoisted into the cab. Natalya sprang in beside it, and in a resolute voice bade the driver draw up for a moment at the Elkman home.

V

The unwonted phenomenon of a cab brought Becky to the door ere her grandmother could jump out. She was still under ten, but prematurely developed in body as in mind. There was something unintentionally insolent in her precocity, in her habitual treatment of adults as equals; but now her face changed almost to a child's, and with a glad tearful cry of 'Oh, grandmother!' she sprang into the old woman's arms.

It was the compensation for little Joseph's 'mamma.' Tears ran down the old woman's cheeks as she hugged the strayed lamb to her breast.

A petulant infantile wail came from within, but neither noted it.

'Where is your step-mother, my poor angel?' Natalya asked in a half whisper.

Becky's forehead gloomed in an ugly frown. Her face became a woman's again. 'One o'clock the public-houses open on Sundays,' she snorted.

'Oh, my God!' cried Natalya, forgetting that the circumstance was favouring her project. 'A Jewish woman! You don't mean to say that she drinks in public-houses?'

'You don't suppose I would let her drink here,' said Becky. 'We have nice scenes, I can tell you. The only consolation is she's better-tempered when she's quite drunk.'

The infant's wail rang out more clamorously.

'Hush, you little beast!' Becky ejaculated, but she moved mechanically within, and her grandmother followed her.

All the ancient grandeur of the sitting-room seemed overclouded with shabbiness and untidiness. To Natalya everything looked and smelt like the things in her bag. And there in a stuffy cradle a baby wrinkled its red face with shrieking.

Becky had bent over it, and was soothing it ere its existence penetrated at all to the old woman's preoccupied brain. Its pipings had been like an unheeded wail of wind round some centre of tragic experience. Even when she realized the child's existence her brain groped for some seconds in search of its identity.

Ah, the baby whose birth had cost that painted poppet's life! So it still lived and howled in unwelcome reminder and perpetuation of that brief but shameful episode. 'Grow dumb like your mother,' she murmured resentfully. What a bequest of misery Henry Elkman had left behind him! Ah, how right she had been to suspect him from the very first!

'But where is my little Joseph?' she said aloud.

'He's playing somewhere in the street.'

'_Ach, mein Gott!_ Playing, when he ought to be weeping like this child of shame. Go and fetch him at once!'

'What do you want him for?'

'I am going to take you both away--out of this misery. You'd like to come and live with me--eh, my lamb?'

'Rather--anything's better than this.'

Natalya caught her to her breast again.

'Go and fetch my Joseph! But quick, quick, before the public-house woman comes back!'

Becky flew out, and Natalya sank into a chair, breathless with emotion and fatigue. The baby in the cradle beside her howled more vigorously, and automatically her foot sought the rocker, and she heard herself singing:

'Sleep, little baby, sleep,
Thy father shall be a Rabbi;
Thy mother shall bring thee almonds;
Blessings on thy little head.'

As the howling diminished, she realized with a shock that she was rocking this misbegotten infant--nay, singing to it a Jewish

cradle-song full of inappropriate phrases. She withdrew her foot as though the rocker had grown suddenly red-hot. The yells broke out with fresh vehemence, and she angrily restored her foot to its old place. '_Nu, nu_,' she cried, rocking violently, 'go to sleep.'

She stole a glance at it, when it grew stiller, and saw that the teat of its feeding-bottle was out of its mouth. 'There, there--suck!' she said, readjusting it. The baby opened its eyes and shot a smile at her, a wonderful, trustful smile from great blue eyes. Natalya trembled; those were the blue eyes that had supplanted the memory of Fanny's dark orbs, and the lips now sucking contentedly were the cherry lips of the painted poppet.

'_Nebbich_; the poor, deserted little orphan,' she apologized to herself. 'And this is how the new Jewish wife does her duty to her step-children. She might as well have been a Christian.' Then a remembrance that the Christian woman had seemingly been an unimpeachable step-mother confused her thoughts further. And while she was groping among them Becky returned, haling in Joseph, who in his turn haled in a kite with a long tail.

The boy, now a sturdy lad of seven, did not palpitate towards his grandmother with Becky's eagerness. Probably he felt the domestic position less. But he surrendered himself to her long hug. 'Did she beat him,' she murmured soothingly, 'beat my own little Joseph?'

'Don't waste time, granny,' Becky broke in petulantly, 'if we _are_ going.'

'No, my dear. We'll go at once.' And, releasing the boy, Natalya partly undid the lower buttons of his waistcoat.

'You wear no four-corner fringes!' she exclaimed tragically. 'She neglects even to see to that. Ah, it will be a good deed to carry you from this godless home.'

'But I don't want to go with you,' he said sullenly, reminded of past inquisitorial worryings about prayers.

'You little fool!' said Becky. 'You _are_ going--and in that cab.'

'In that cab?' he cried joyfully.

'Yes, my apple. And you will never be beaten again.'

'Oh, _she_ don't hurt!' he said contemptuously. 'She hasn't even got a cane--like at school.'

'But shan't we take our things?' said Becky.

'No, only the things you stand in. They shan't have any excuse for taking you back. I'll find you plenty of clothes, as good as new.'

'And little Daisy?'

'Oh, is it a girl? Your stepmother will look after that. She can't complain of one burden.'

She hustled the children into the cab, where, with the sack and herself, they made a tightly-packed quartette.

'I say, I didn't bargain for extras inside,' grumbled the cabman.

'You can't reckon these children,' said Natalya, with confused legal recollections; 'they're both under seven.'

The cabman started. Becky stared out of the window. 'I wonder if we'll pass Mrs. Elkman,' she said, amused. Joseph busied himself with disentangling the tails of his kite.

But Natalya was too absorbed to notice their indifference to her. That poor little Daisy! The image of the baby swam vividly before her. What a terrible fate to be left in the hands of the public-house woman! Who knew what would happen to it? What if, in her drunken fury at the absence of Becky and Joseph, she did it a mischief? At the best the besotted creature would not take cordially to the task of bringing it up. It was no child of hers--had not even the appeal of pure Jewish blood. And there it lay, smiling, with its beautiful blue eyes. It had smiled trustfully on herself, not knowing she was to leave it to its fate. And now it was crying; she heard it crying above the rattle of the cab. But how could she charge herself with it--she, with her daily rounds to make? The other children were grown up, passed the day at school. No, it was impossible. And the child's cry went on in her imagination louder and louder.

She put her head out of the window. 'Turn back! Turn back! I've forgotten something.'

The cabman swore. 'D'ye think you've taken me by the week?'

'Threepence extra. Drive back.'

The cab turned round, the innocent horse got a stinging flip of the whip, and set off briskly.

'What have you forgotten, grandmother?' said Becky. 'It's very careless of you.'

The cab stopped at the door. Natalya looked round nervously, sprang out, and then uttered a cry of despair.

'_Ach_, we shut the door!' And the inaccessible baby took on a tenfold desirability.

'It's all right,' said Becky. 'Just turn the handle.'

Natalya obeyed and ran in. There was the baby, not crying, but sleeping peacefully. Natalya snatched it up frenziedly, and hurried the fresh-squalling bundle into the cab.

'Taking Daisy?' cried Becky. 'But she isn't yours!'

Natalya shut the cab-door with a silencing bang, and the vehicle turned again Ghettowards.

VI

The fact that Natalya had taken possession of the children could not be kept a secret, but the step-mother's family made no effort to regain them, and, indeed, the woman herself shortly went the way of all Henry Elkman's wives, though whether she, like the rest, had a successor, is unknown.

The sudden change from a lone old lady to a mater-familias was not, however, so charming as Natalya had imagined. The cost of putting Daisy out to nurse was a terrible tax, but this was nothing compared to the tax on her temper levied by her legitimate grandchildren, who began to grumble on the first night at the poverty and pokiness of the garret, and were thenceforward never without a lament for the good old times. They had, indeed, been thoroughly spoilt by the father and the irregular ménage. The Christian wife's influence had been refining but too temporary. It had been only long enough to wean Joseph from the religious burdens indoctrinated by Fanny, and thus to add to the grandmother's difficulties in coaxing him back to the yoke of piety.

The only sweet in Natalya's cup turned out to be the love of little Daisy, who grew ever more beautiful, gracious, and winning.

Natalya had never known so lovable a child. All Daisy did seemed to her perfect. For instant obedience and instant comprehension she declared her matchless.

One day, when Daisy was three, the child told the grandmother that in her momentary absence Becky had pulled Joseph's hair.

'Hush! You mustn't tell tales,' Natalya said reprovingly.

'Becky did not pull Joey's hair,' Daisy corrected herself instantly.

Much to the disgust of Becky, who wished to outgrow the Ghetto, even while she unconsciously manifested its worst heritages, Daisy picked up the Yiddish words and phrases, which, in spite of Becky's remonstrances, Natalya was too old to give up. This was not the only subject of dispute between Becky and the grandmother, whom she roundly accused of favouritism of Daisy, and she had not reached fifteen when, with an independence otherwise praiseworthy, she set up for herself on her earnings in the fur establishment of her second step-mother's father, lodging with a family who, she said, bored her less than her grandmother.

In another year or so, freed from the compulsory education of the School Board, Joseph joined her. And thus, by the unforeseen turns of Fortune's wheel, the old-clo' woman of seventy-five was left alone with the child of seven.

But this child was compensation for all she had undergone, for all the years of trudging and grubbing and patching and turning. Daisy threaded her needle for her at night when her keen eyes began to fail, and while she made the old clo' into new, Daisy read aloud her English story-books. Natalya took an absorbing interest in these nursery tales, heard for the first time in her second childhood. 'Jack the Giant-killer,' 'Aladdin,' 'Cinderella,' they were all delightful novelties. The favourite story of both was 'Little Red Riding-Hood,' with its refrain of 'Grandmother, what large eyes you've got!' That could be said with pointed fun; it seemed to be written especially for them. Often Daisy would look up suddenly and say: 'Grandmother, what a large mouth you've got!' 'All the better to bite you with,' grandmother would reply. And then there would be hugs and kisses.

But Friday night was the great night, the one night of the week on which Natalya could be stopped from working. Only religion was strong enough to achieve that. The two Sabbath candles in the copper candlesticks stood on the white tablecloth, and were lighted as soon as the welcome dusk announced the advent of the holy day, and they shed their pious illumination on her dish of fish and the ritually-twisted loaves. And after supper Natalya would sing the Hebrew grace at much leisurely length and with great unction. Then she would tell stories of her youth in Poland--comic tales mixed with tales of oppression and the memories of ancient wrong. And Daisy would weep and laugh and thrill. The fusion of races had indeed made her sensitive and intelligent beyond the common, and Natalya was not unjustified in planning out for her some illustrious future.

But after eighteen months of this delightful life Natalya's wonderful vitality began slowly to collapse. She earned less and less, and, amid

her gratitude to God for having relieved her of the burden of Becky and Joseph, a secret fear entered her heart. Would she be taken away before Daisy became self-supporting? Nay, would she even be able to endure the burden till the end? What made things worse was that, owing to the increase of immigrants, her landlord now exacted an extra shilling a week for rent. When Daisy was asleep the old woman hung over the bed, praying for life, for strength.

It was a sultry summer, making the trudge from door to door, under the ever-swelling sack, almost intolerable. And a little thing occurred to bring home cruelly to Natalya the decline of all her resources, physical and financial. The children's country holiday was in the air at Daisy's Board School, throwing an aroma and a magic light over the droning class-room. Daisy was to go, was to have a fortnight with a cottager in Kent; but towards the expenses the child's parent or guardian was expected to contribute four shillings. Daisy might have gone free had she pleaded absolute poverty, but that would have meant investigation. From such humiliation Natalya shrank. She shrank even more from frightening the poor child by uncovering the skeleton of poverty. Most of all she shrank from depriving Daisy of all the rural delights on which the child's mind dwelt in fascinated anticipation. Natalya did not think much of the country herself, having been born in a poor Polish village, amid huts and pigs, but she would not disillusion Daisy.

By miles of extra trudging in the heat, and miracles of bargaining with bewildered housewives, Natalya raised the four shillings, and the unconscious Daisy glided off in the happy, noisy train, while on the platform Natalya waved her coloured handkerchief wet with tears.

That first night without the little sunshiny presence was terrible for the old-clo' woman. The last prop against decay and collapse seemed removed. But the next day a joyous postcard came from Daisy, which the greengrocer downstairs read to Natalya, and she was able to take up her sack again and go forth into the sweltering streets.

In the second week the child wrote a letter, saying that she had found a particular friend in an old lady, very kind and rich, who took her for drives in a chaise, and asked her many questions. This old lady seemed to have taken a fancy to her from the moment she saw her playing outside the cottage.

'Perhaps God has sent her to look after the child when I am gone,' thought Natalya, for the task of going down and up the stairs to get this letter read made her feel as if she would never go up and down them again.

Beaten at last, she took to her bed. Her next-room neighbour, the cobbler's wife, tended her and sent for the 'penny doctor.' But she

would not have word written to Daisy or her holiday cut short. On the day Daisy was to come back she insisted, despite all advice and warning, in being up and dressed. She sent everybody away, and lay on her bed till she heard Daisy's footsteps, then she started to her feet, and drew herself up in pretentious good health. But the sound of other footsteps, and the entry of a spectacled, silver-haired old gentlewoman with the child, spoilt her intended hug. Daisy's new friend had passed from her memory, and she stared pathetically at the strange lady and the sunburnt child.

'Oh, grandmother, what great eyes you've got!' And Daisy ran laughingly towards her.

The usual repartee was wanting.

'And the room is not tidied up,' Natalya said reproachfully, and began dusting a chair for the visitor. But the old lady waved it aside.

'I have come to thank you for all you have done for my grandchild.'

'_Your_ grandchild?' Natalya fell back on the bed.

'Yes. I have had inquiries made--it is quite certain. Daisy was even called after me. I am glad of that, at least.' Her voice faltered.

Natalya sat as bolt upright as years of bending under sacks would allow.

'And you have come to take her from me!' she shrieked.

Already Daisy's new ruddiness seemed to her the sign of life that belonged elsewhere.

'No, no, do not be alarmed. I have suffered enough from my selfishness. It was my bad temper drove my daughter from me.' She bowed her silver head till her form seemed as bent as Natalya's. 'What can I do to repair--to atone? Will you not come and live with me in the country, and let me care for you? I am not rich, but I can offer you every comfort.'

Natalya shook her head. 'I am a Jewess. I could not eat with you.'

'That's just what _I_ told her, grandmother,' added Daisy eagerly.

'Then the child must remain with you at my expense,' said the old lady.

'But if she likes the country so----' murmured Natalya.

'I like you better, grandmother.' And Daisy laid her ruddied cheek to the withered cheek, which grew wet with ecstasy.

'She calls _you_ "grandmother," not me,' said the old gentlewoman with a sob.

'Yes, and I wished her mother dead. God forgive me!'

Natalya burst into a passion of tears and rocked to and fro, holding Daisy tightly to her faintly pulsing heart.

'What did you say?' Daisy's grandmother flamed and blazed with her ancient anger. 'You wished my Madge dead?'

Natalya nodded her head. Her arms unloosed their hold of Daisy. 'Dead, dead, dead,' she repeated in a strange, crooning voice. Gradually a vacant look crept over her face, and she fell back again on the bed. She looked suddenly very old, despite her glossy black wig.

'She is ill!' Daisy shrieked.

The cobbler's wife ran in and helped to put her back between the sheets, and described volubly her obstinacy in leaving her bed. Natalya lived till near noon of the next day, and Daisy's real grandmother was with her still at the end, side by side with the Jewish death-watcher.

About eleven in the morning Natalya said: 'Light the candles, Daisy, the Sabbath is coming in.' Daisy spread a white tablecloth on the old wooden table, placed the copper candlesticks upon it, drew it to the bedside, and lighted the candles. They burned with curious unreality in the full August sunshine.

A holy peace overspread the old-clo' woman's face. Her dried-up lips mumbled the Hebrew prayer, welcoming the Sabbath eve. Gradually they grew rigid in death.

'Daisy,' said her grandmother, 'say the text I taught you.'

'"Come unto Me, all ye that labour and are heavy laden,"' sobbed the child obediently, '"and I will give you rest."'

THE BOARDING HOUSE

The Project Gutenberg Etext of *Dubliners*
by James Joyce

MRS. MOONEY was a butcher's daughter. She was a woman who was quite able to keep things to herself: a determined woman. She had married her father's foreman and opened a butcher's shop near Spring Gardens. But as soon as his father-in-law was dead Mr. Mooney began to go to the devil. He drank, plundered the till, ran headlong into debt. It was no use making him take the pledge: he was sure to break out again a few days after. By fighting his wife in the presence of customers and by buying bad meat he ruined his business. One night he went for his wife with the cleaver and she had to sleep a neighbour's house.

After that they lived apart. She went to the priest and got a separation from him with care of the children. She would give him neither money nor food nor house-room; and so he was obliged to enlist himself as a sheriff's man. He was a shabby stooped little drunkard with a white face and a white moustache white eyebrows, pencilled above his little eyes, which were veined and raw; and all day long he sat in the bailiff's room, waiting to be put on a job. Mrs. Mooney, who had taken what remained of her money out of the butcher business and set up a boarding house in Hardwicke Street, was a big imposing woman. Her house had a floating population made up of tourists from Liverpool and the Isle of Man and, occasionally, artistes from the music halls. Its resident population was made up of clerks from the city. She governed the house cunningly and firmly, knew when to give credit, when to be stern and when to let things pass. All the resident young men spoke of her as The Madam.

Mrs. Mooney's young men paid fifteen shillings a week for board and lodgings (beer or stout at dinner excluded). They shared in common tastes and occupations and for this reason they were very chummy with one another. They discussed with one another the chances of favourites and outsiders. Jack Mooney, the Madam's son, who was clerk to a commission agent in Fleet Street, had the reputation of being a hard case. He was fond of using soldiers' obscenities: usually he came home in the small hours. When he met his friends he had always a good one to tell them and he was always sure to be on to a good thing-that is to say, a likely horse or a likely artiste. He was also handy with the mits and sang comic songs. On Sunday nights there would often be a reunion in Mrs. Mooney's front drawing-room. The music-hall artistes would oblige; and Sheridan played waltzes and polkas and vamped

accompaniments. Polly Mooney, the Madam's daughter, would also sing. She sang:

I'm a ... naughty girl.
You needn't sham:
You know I am.

Polly was a slim girl of nineteen; she had light soft hair and a small full mouth. Her eyes, which were grey with a shade of green through them, had a habit of glancing upwards when she spoke with anyone, which made her look like a little perverse madonna. Mrs. Mooney had first sent her daughter to be a typist in a corn-factor's office but, as a disreputable sheriff's man used to come every other day to the office, asking to be allowed to say a word to his daughter, she had taken her daughter home again and set her to do housework. As Polly was very lively the intention was to give her the run of the young men. Besides young men like to feel that there is a young woman not very far away. Polly, of course, flirted with the young men but Mrs. Mooney, who was a shrewd judge, knew that the young men were only passing the time away: none of them meant business. Things went on so for a long time and Mrs. Mooney began to think of sending Polly back to typewriting when she noticed that something was going on between Polly and one of the young men. She watched the pair and kept her own counsel.

Polly knew that she was being watched, but still her mother's persistent silence could not be misunderstood. There had been no open complicity between mother and daughter, no open understanding but, though people in the house began to talk of the affair, still Mrs. Mooney did not intervene. Polly began to grow a little strange in her manner and the young man was evidently perturbed. At last, when she judged it to be the right moment, Mrs. Mooney intervened. She dealt with moral problems as a cleaver deals with meat: and in this case she had made up her mind.

It was a bright Sunday morning of early summer, promising heat, but with a fresh breeze blowing. All the windows of the boarding house were open and the lace curtains ballooned gently towards the street beneath the raised sashes. The belfry of George's Church sent out constant peals and worshippers, singly or in groups, traversed the little circus before the church, revealing their purpose by their self-contained demeanour no less than by the little volumes in their gloved hands. Breakfast was over in the boarding house and the table of the breakfast-room was covered with plates on which lay yellow streaks of eggs with morsels of bacon-fat and bacon-rind. Mrs. Mooney sat in the straw arm-chair and watched the servant Mary remove the breakfast things. She mad Mary collect the crusts and pieces of broken bread to help to make

Tuesday's bread- pudding. When the table was cleared, the broken bread collected, the sugar and butter safe under lock and key, she began to reconstruct the interview which she had had the night before with Polly. Things were as she had suspected: she had been frank in her questions and Polly had been frank in her answers. Both had been somewhat awkward, of course. She had been made awkward by her not wishing to receive the news in too cavalier a fashion or to seem to have connived and Polly had been made awkward not merely because allusions of that kind always made her awkward but also because she did not wish it to be thought that in her wise innocence she had divined the intention behind her mother's tolerance.

Mrs. Mooney glanced instinctively at the little gilt clock on the mantelpiece as soon as she had become aware through her revery that the bells of George's Church had stopped ringing. It was seventeen minutes past eleven: she would have lots of time to have the matter out with Mr. Doran and then catch short twelve at Marlborough Street. She was sure she would win. To begin with she had all the weight of social opinion on her side: she was an outraged mother. She had allowed him to live beneath her roof, assuming that he was a man of honour and he had simply abused her hospitality. He was thirty-four or thirty-five years of age, so that youth could not be pleaded as his excuse; nor could ignorance be his excuse since he was a man who had seen something of the world. He had simply taken advantage of Polly's youth and inexperience: that was evident. The question was: What reparation would he make?

There must be reparation made in such case. It is all very well for the man: he can go his ways as if nothing had happened, having had his moment of pleasure, but the girl has to bear the brunt. Some mothers would be content to patch up such an affair for a sum of money; she had known cases of it. But she would not do so. For her only one reparation could make up for the loss of her daughter's honour: marriage.

She counted all her cards again before sending Mary up to Doran's room to say that she wished to speak with him. She felt sure she would win. He was a serious young man, not rakish or loud-voiced like the others. If it had been Mr. Sheridan or Mr. Meade or Bantam Lyons her task would have been much harder. She did not think he would face publicity. All the lodgers in the house knew something of the affair; details had been invented by some. Besides, he had been employed for thirteen years in a great Catholic wine-merchant's office and publicity would mean for him, perhaps, the loss of his job. Whereas if he agreed all might be well. She knew he had a good screw for one thing and she suspected he had a bit of stuff put by.

Nearly the half-hour! She stood up and surveyed herself in the pier-glass. The decisive expression of her great florid face satisfied her and she thought of some mothers she knew who could not get their daughters off their hands.

Mr. Doran was very anxious indeed this Sunday morning. He had made two attempts to shave but his hand had been so unsteady that he had been obliged to desist. Three days' reddish beard fringed his jaws and every two or three minutes a mist gathered on his glasses so that he had to take them off and polish them with his pocket-handkerchief. The recollection of his confession of the night before was a cause of acute pain to him; the priest had drawn out every ridiculous detail of the affair and in the end had so magnified his sin that he was almost thankful at being afforded a loophole of reparation. The harm was done. What could he do now but marry her or run away? He could not brazen it out. The affair would be sure to be talked of and his employer would be certain to hear of it. Dublin is such a small city: everyone knows everyone else's business. He felt his heart leap warmly in his throat as he heard in his excited imagination old Mr. Leonard calling out in his rasping voice: "Send Mr. Doran here, please."

All his long years of service gone for nothing! All his industry and diligence thrown away! As a young man he had sown his wild oats, of course; he had boasted of his free-thinking and denied the existence of God to his companions in public- houses. But that was all passed and done with... nearly. He still bought a copy of Reynolds's Newspaper every week but he attended to his religious duties and for nine-tenths of the year lived a regular life. He had money enough to settle down on; it was not that. But the family would look down on her. First of all there was her disreputable father and then her mother's boarding house was beginning to get a certain fame. He had a notion that he was being had. He could imagine his friends talking of the affair and laughing. She was a little vulgar; some times she said "I seen" and "If I had've known." But what would grammar matter if he really loved her? He could not make up his mind whether to like her or despise her for what she had done. Of course he had done it too. His instinct urged him to remain free, not to marry. Once you are married you are done for, it said.

While he was sitting helplessly on the side of the bed in shirt and trousers she tapped lightly at his door and entered. She told him all, that she had made a clean breast of it to her mother and that her mother would speak with him that morning. She cried and threw her arms round his neck, saying:

"O Bob! Bob! What am I to do? What am I to do at all?"

She would put an end to herself, she said.

He comforted her feebly, telling her not to cry, that it would be all right, never fear. He felt against his shirt the agitation of her bosom.

It was not altogether his fault that it had happened. He remembered well, with the curious patient memory of the celibate, the first casual caresses her dress, her breath, her fingers had given him. Then late one night as he was undressing for she had tapped at his door, timidly. She wanted to relight her candle at his for hers had been blown out by a gust. It was her bath night. She wore a loose open combing- jacket of printed flannel. Her white instep shone in the opening of her furry slippers and the blood glowed warmly behind her perfumed skin. From her hands and wrists too as she lit and steadied her candle a faint perfume arose.

On nights when he came in very late it was she who warmed up his dinner. He scarcely knew what he was eating feeling her beside him alone, at night, in the sleeping house. And her thoughtfulness! If the night was anyway cold or wet or windy there was sure to be a little tumbler of punch ready for him. Perhaps they could be happy together....

They used to go upstairs together on tiptoe, each with a candle, and on the third landing exchange reluctant goodnights. They used to kiss. He remembered well her eyes, the touch of her hand and his delirium....

But delirium passes. He echoed her phrase, applying it to himself: "What am I to do?" The instinct of the celibate warned him to hold back. But the sin was there; even his sense of honour told him that reparation must be made for such a sin.

While he was sitting with her on the side of the bed Mary came to the door and said that the missus wanted to see him in the parlour. He stood up to put on his coat and waistcoat, more helpless than ever. When he was dressed he went over to her to comfort her. It would be all right, never fear. He left her crying on the bed and moaning softly: "O my God!"

Going down the stairs his glasses became so dimmed with moisture that he had to take them off and polish them. He longed to ascend through the roof and fly away to another country where he would never hear again of his trouble, and yet a force pushed him downstairs step by step. The implacable faces of his employer and of the Madam stared upon his discomfiture. On the last flight of stairs he passed Jack Mooney who was coming up from the

pantry nursing two bottles of Bass. They saluted coldly; and the lover's eyes rested for a second or two on a thick bulldog face and a pair of thick short arms. When he reached the foot of the staircase he glanced up and saw Jack regarding him from the door of the return-room.

Suddenly he remembered the night when one of the musichall artistes, a little blond Londoner, had made a rather free allusion to Polly. The reunion had been almost broken up on account of Jack's violence. Everyone tried to quiet him. The music-hall artiste, a little paler than usual, kept smiling and saying that there was no harm meant: but Jack kept shouting at him that if any fellow tried that sort of a game on with his sister he'd bloody well put his teeth down his throat, so he would.

Polly sat for a little time on the side of the bed, crying. Then she dried her eyes and went over to the looking-glass. She dipped the end of the towel in the water-jug and refreshed her eyes with the cool water. She looked at herself in profile and readjusted a hairpin above her ear. Then she went back to the bed again and sat at the foot. She regarded the pillows for a long time and the sight of them awakened in her mind secret, amiable memories. She rested the nape of her neck against the cool iron bed-rail and fell into a reverie. There was no longer any perturbation visible on her face.

She waited on patiently, almost cheerfully, without alarm. her memories gradually giving place to hopes and visions of the future. Her hopes and visions were so intricate that she no longer saw the white pillows on which her gaze was fixed or remembered that she was waiting for anything.

At last she heard her mother calling. She started to her feet and ran to the banisters.

"Polly! Polly!"

"Yes, mamma?"

"Come down, dear. Mr. Doran wants to speak to you."

Then she remembered what she had been waiting for.

BLUE & GREEN

The Project Gutenberg EBook of *Monday or Tuesday,* by Virginia Woolf

GREEN

The pointed fingers of glass hang downwards. The light slides down the glass, and drops a pool of green. All day long the ten fingers of the lustre drop green upon the marble. The feathers of parakeets--their harsh cries--sharp blades of palm trees--green, too; green needles glittering in the sun. But the hard glass drips on to the marble; the pools hover above the dessert sand; the camels lurch through them; the pools settle on the marble; rushes edge them; weeds clog them; here and there a white blossom; the frog flops over; at night the stars are set there unbroken. Evening comes, and the shadow sweeps the green over the mantelpiece; the ruffled surface of ocean. No ships come; the aimless waves sway beneath the empty sky. It's night; the needles drip blots of blue. The green's out.

BLUE

The snub-nosed monster rises to the surface and spouts through his blunt nostrils two columns of water, which, fiery-white in the centre, spray off into a fringe of blue beads. Strokes of blue line the black tarpaulin of his hide. Slushing the water through mouth and nostrils he sings, heavy with water, and the blue closes over him dowsing the polished pebbles of his eyes. Thrown upon the beach he lies, blunt, obtuse, shedding dry blue scales. Their metallic blue stains the rusty iron on the beach. Blue are the ribs of the wrecked rowing boat. A wave rolls beneath the blue bells. But the cathedral's different, cold, incense laden, faint blue with the veils of madonnas.

Poems from The Project Gutenberg Etext of *The Second Book of Modern Verse*
Ed. Jessie B. Rittenhouse

The Bitter Herb. [Jeanne Robert Foster]

O bitter herb, Forgetfulness,
I search for you in vain;
You are the only growing thing
Can take away my pain.

When I was young, this bitter herb

Grew wild on every hill;
I should have plucked a store of it,
And kept it by me still.

I hunt through all the meadows
Where once I wandered free,
But the rare herb, Forgetfulness,
It hides away from me.

O bitter herb, Forgetfulness,
Where is your drowsy breath?
Oh, can it be your seed has blown
Far as the Vales of Death?

Behind the House is the Millet Plot. [Muna Lee]

Behind the house is the millet plot,
And past the millet, the stile;
And then a hill where melilot
Grows with wild camomile.

There was a youth who bade me goodby
Where the hill rises to meet the sky.
I think my heart broke; but I have forgot
All but the smell of the white melilot.

BALLATETTA

Project Gutenberg's *Canzoni & Ripostes*, by Ezra Pound and T.E. Hulme

The light became her grace and dwelt among
Blind eyes and shadows that are formed as men
Lo, how the light doth melt us into song:

The broken sunlight for a healm she beareth
Who hath my heart in jurisdiction.
In wild-wood never fawn nor fallow fareth
So silent light; no gossamer is spun
So delicate as she is, when the sun
Drives the clear emeralds from the bended grasses
Lest they should parch too swiftly, where she passes.

BOYS BATHING.

Round them a fierce, wide, crazy noon
Heaves with crushed lips and glowing sides
Against the huge and drowsy sun.
Beneath them turn the glittering tides
Where dizzy waters reel with gold,
And strange, rich trophies sink and rise
From decks of sunken argosies.
With shining arms they cleave the cold
Far reaches of the sea, and beat
The hissing foam with flash of feet
Into bright fangs, while breathlessly
Curls over them the amorous sea.

Naked they laugh and revel there.
One shakes the sea-drops from his hair,
Then, singing, takes the bubbles: one
Lies couched among the shells, the sands
Telling gold hours between his hands:
One floats like sea-wrack in the sun.
The gods of Youth, the lords of Love,
Greeks of eternal Thessaly,
Mocking the powers they know not of,
Naked and unembraced and free!
To whom the Siren sings in vain
To-day, to-morrow who shall be
The destined sport of gods and men.

Unseen the immortal ones are here,
Remembering their mortal loves--
The strange, sweet flesh, the lips that were
Frail and most perishably fair.
Diana leaves her whispering groves,
And of Actæon dreams and sighs,
And hears the hounds bay in the wood.
Oh, Cythera, the trembling blood
Upon one petal's paling mouth
Before thee and this noon must rise
While thou remember Adon's eyes!
One mournful and complaining shade
Beyond Avernus bows his head,
Dreaming of one beloved youth
Borne from him, lost and dazed and dead,
Dragged by the nymphs' avenging hair

Into the sea-bed oozing dim,
In that cold twilight unaware
Of each great sunrise over him.

* * * * *

One day, while still these waters run,
And noon still heaves beneath this sun,
You shall creep, unremembering,
Whom Life has humbled and subdued,
Ruined your bodies, tamed your blood,
No more the lords of anything.
But spent and racked with mortal pains,
The slow tide pushing through your veins,
Coldly you face this magic shore;
For you the disenchanted noon
Scarce haunted is with ghosts that were
Once, and were you, and are no more.

Faltering against the wind and sun
That vainly seek your hair for gold,
Stubborned with habit, grey and old,
You know not why you wander here,
Nor what vague dream pursues you still,
For Life has taken fullest toll
Of all your beauty; on each soul
Love's hand has left his bitter mark,
Has had of you his utmost will,
And thrusts you headlong to the dark.

And colder than these waters are
The stream that takes your limbs at last:
Earth's vales and hills drift slowly past...
One shore far off, and one more far.

THE BOY AND THE ANGEL.

Project Gutenberg's *Pomegranates from an English Garden,* by Robert Browning

Morning, evening, noon and night,
“Praise God!” sang Theocrite.

Then to his poor trade he turned,
Whereby the daily meal was earned.

Hard he laboured, long and well;
O’er his work the boy’s curls fell.

But ever, at each period,
He stopped and sang, “Praise God!”

Then back again his curls he threw,
And cheerful turned to work anew.

Said Blaise, the listening monk, “Well done;
“I doubt not thou art heard, my son:

“As well as if thy voice to-day
“Were praising God, the Pope’s great way.

“This Easter Day, the Pope at Rome
“Praises God from Peter’s dome.”

Said Theocrite, “Would God that I
“Might praise Him, that great way, and die!”

Night passed, day shone,
And Theocrite was gone.

With God a day endures alway,
A thousand years are but a day.

God said in heaven, “Nor day nor night
“Now brings the voice of my delight.”

Then Gabriel, like a rainbow’s birth,
Spread his wings and sank to earth;

Entered, in flesh, the empty cell,
Lived there, and played the craftsman well;

And morning, evening, noon and night,
Praised God in place of Theocrite.

And from a boy, to youth he grew:
The man put off the stripling’s hue:

The man matured and fell away
Into the season of decay:

And ever o’er the trade he bent,
And ever lived on earth content.

(He did God’s will; to him, all one

If on the earth or in the sun.)

God said, “A praise is in mine ear;
“There is no doubt in it, no fear:

“So sing old worlds, and so
“New worlds that from my footstool go.

“Clearer loves sound other ways:
“I miss my little human praise.”

Then forth sprang Gabriel’s wings, off fell
The flesh disguise, remained the cell.

’Twas Easter Day: He flew to Rome,
And paused above Saint Peter’s dome.

In the tiring-room close by
The great outer gallery,

With his holy vestments dight,
Stood the new Pope, Theocrite:

And all his past career
Came back upon him clear,

Since when, a boy, he plied his trade,
Till on his life the sickness weighed;

And in his cell, when death drew near,
An angel in a dream brought cheer:

And, rising from the sickness drear,
He grew a priest, and now stood here.

To the East with praise he turned,
And on his sight the angel burned.

“I bore thee from thy craftsman’s cell,
“And set thee here; I did not well.

“Vainly I left my angel-sphere,
“Vain was thy dream of many a year.

“Thy voice’s praise seemed weak; it dropped—
“Creation’s chorus stopped!

“Go back and praise again
“The early way, while I remain.

"With that weak voice of our disdain,
"Take up creation's pausing strain.

"Back to the cell and poor employ:
"Resume the craftsman and the boy!"

Theocrite grew old at home;
A new Pope dwelt in Peter's dome.

One vanished as the other died:
They sought God side by side.

The lesson of this beautiful fancy is the complement of the "Shop" lesson. Even drudgery may be divine; since the will of God is the work to be done, no matter whether under St. Peter's dome or in the cell of the craftsman (the Boy)—"all one, if on the earth or in the sun" (the Angel).

The poem is so full of exquisite things, that only a few can be noted. The value of the "little human praise" to God Himself (distich 12), all the dearer because of the doubts and fears in it (20-22); and the contrast between its seeming weakness and insignificance and its real importance as a necessary part of the great chorus of creation (34); the eager desire of Gabriel to anticipate the will of God, and his content to live on earth and bend over a common trade, if only thus he can serve Him best (13-19); and again the content of the "new pope Theocrite" to go back to his "cell and poor employ" and fill out the measure of his day of service, growing old at home, while Gabriel as contentedly takes his place as pope (probably a harder trial than the more menial service) and waits for the time when both "sought God side by side"—these are some of the fine and far reaching thoughts which find simple and beautiful expression here.

Longfellow's "King Robert of Sicily," though not really parallel, has points of similarity to "The Boy and the Angel."

THE BANQUET

The Project Gutenberg EBook of *Poems of West & East,* by Vita Sackville-West

WINE ran; rich yellow wine upon the marble floor
Recklessly spilled; the Nubians ran to pour
A fresh libation; and to scatter showers
Of red rose petals; candles overturned
Smouldered among the ruins of the flowers,

And overhead swung heavy shadowy bowers
Of blue and purple grapes,
And strange fantastic shapes
Of varied birds, where lanterns hung and dimly burned.

The melon and the orange, turned to use
As golden balls with laughter lightly tossed,
Lay burst and drained of their sweet juice,
Uselessly ripened and for ever lost;
All glowing as they lay upon the ground,
As envious of their fellows,
Who, piled in luscious reds and yellows,
Enriched the tables all around,
The tables low,
Sheltering the reclining grace;
Here, through the curling smoke, a swarthy face,
And jewelled turban bound about the head,
And here the glow
Of red carnation pressed to lips as warmly red.

And as they lay in their luxurious ease,
Playing with grapes and rose-leaves, slim
And willowy slave-girls, in the hope to please,
Twisted and danced before them, to the dim
Uncertain music in the shadows played;
Some came with supple limb,
With Mystery's aid
And snake-like creep,
Others with riotous leap
And made festivity to Bacchus wed;
Others with stiff Egyptian tread,
And straight black hair hanging in glossy braid,
They danced, unnoted, and exhausted fled.
* * * * *
Still floated from beneath the acacia-tree
The droning Eastern music's minor key.

BERTRAND AND GOURGAUD TALK OVER OLD TIMES

The Project Gutenberg EBook of *Toward the Gulf,* by Edgar Lee Masters

Gourgaud, these tears are tears--but look, this laugh,
How hearty and serene--you see a laugh
Which settles to a smile of lips and eyes
Makes tears just drops of water on the leaves

When rain falls from a sun-lit sky, my friend,
Drink to me, clasp my hand, embrace me, call me
Beloved Bertrand. Ha! I sigh for joy.
Look at our Paris, happy, whole, renewed,
Refreshed by youth, new dressed in human leaves,
Shaking its fresh blown blossoms to the world.
And here we sit grown old, of memories
Top-full--your hand--my breast is all afire
With happiness that warms, makes young again.

You see it is not what we saw to-day
That makes me spirit, rids me of the flesh:--
But all that I remember, we remember
Of what the world was, what it is to-day,
Beholding how it grows. Gourgaud, I see
Not in the rise of this man or of that,
Nor in a battle's issue, in the blow
That lifts or fells a nation--no, my friend,
God is not there, but in the living stream
Which sweeps in spite of eddies, undertows,
Cross-currents, what you will, to that result
Where stillness shows the star that fits the star
Of truth in spirits treasured, imaged, kept
Through sorrow, blood and death,--God moves in that
And there I find Him.

But these tears--for whom
Or what are tears? The Old Guard--oh, my friend
That melancholy remnant! And the horse,
White, to be sure, but not Marengo, wearing
The saddle and the bridle which he used.
My tears take quality for these pitiful things,
But other quality for the purple robe
Over the coffin lettered in pure gold
"Napoleon"--ah, the emperor at last
Come back to Paris! And his spirit looks
Over the land he loved, with what result?
Does just the army that acclaimed him rise
Which rose to hail him back from Elba?--no
All France acclaims him! Princes of the church,
And notables uncover! At the door
A herald cries "The Emperor!" Those assembled
Rise and do reverence to him. Look at Soult,
He hands the king the sword of Austerlitz,
The king turns to me, hands the sword to me,
I place it on the coffin--dear Gourgaud,
Embrace me, clasp my hand! I weep and laugh
For thinking that the Emperor is home;
For thinking I have laid upon his bed

The sword that makes inviolable his bed,
Since History stepped to where I stood and stands
To say forever: Here he rests, be still,
Bow down, pass by in reverence--the Ages
Like giant caryatides that look
With sleepless eyes upon the world and hold
With never tiring hands the Vault of Time,
Command your reverence.

What have we seen?
Why this, that every man, himself achieving
Exhausts the life that drives him to the work
Of self-expression, of the vision in him,
His reason for existence, as he sees it.
He may or may not mould the epic stuff
As he would wish, as lookers on have hope
His hands shall mould it, and by failing take--
For slip of hand, tough clay or blinking eye,
A cinder for that moment in the eye--
A world of blame; for hooting or dispraise
Have all his work misvalued for the time,
And pump his heart up harder to subdue
Envy, or fear or greed, in any case
He grows and leaves and blossoms, so consumes
His soul's endowment in the vision of life.
And thus of him. Why, there at Fontainebleau
He is a man full spent, he idles, sleeps,
Hears with dull ears: Down with the Corsican,
Up with the Bourbon lilies! Royalists,
Conspirators, and clericals may shout
Their hatred of him, but he sits for hours
Kicking the gravel with his little heel,
Which lately trampled sceptres in the mud.
Well, what was he at Waterloo?--you know:
That piercing spirit which at mid-day power
Knew all the maps of Europe--could unfold
A map and say here is the place, the way,
The road, the valley, hill, destroy them here.
Why, all his memory of maps was blurred
The night before he failed at Waterloo.
The Emperor was sick, my friend, we know it.
He could not ride a horse at Waterloo.
His soul was spent, that's all. But who was rested?
The dirty Bourbons skulking back to Paris,
Now that our giant democrat was sick.
Oh, yes, the dirty Bourbons skulked to Paris
Helped by the Duke and Blücher, damn their souls.

What is a man to do whose work is done

And does not feel so well, has cancer, say?
You know he could have reached America
After his fall at Waterloo. Good God!
If only he had done it! For they say
New Orleans is a city good to live in.
And he had ceded to America
Louisiana, which in time would curb
The English lion. But he didn't go there.
His mind was weakened else he had foreseen
The lion he had tangled, wounded, scourged
Would claw him if it got him, play with him
Before it killed him. Who was England then?--

An old, mad, blind, despised and dying king
Who lost a continent for the lust that slew
The Emperor--the world will say at last
It was no other. Who was England then?
A regent bad as husband, father, son,
Monarch and friend. But who was England then?
Great Castlereagh who cut his throat, but who
Had cut his country's long before. The duke--
Since Waterloo, and since the Emperor slept--
The English stoned the duke, he bars his windows
With iron 'gainst the mobs who break to fury,
To see the Duke waylay democracy.
The world's great conqueror's conqueror!--Eh bien!
Grips England after Waterloo, but when
The people see the duke for what he is:
A blocker of reform, a Tory sentry,
A spotless knight of ancient privilege,
They up and stone him, by the very deed
Stone him for wronging the democracy
The Emperor erected with the sword.
The world's great conqueror's conqueror--Oh, I sicken!
Odes are like head-stones, standing while the graves
Are guarded and kept up, but falling down
To ruin and erasure when the graves
Are left to sink. Hey! there you English poets,
Picking from daily libels, slanders, junk
Of metal for your tablets 'gainst the Emperor,
Melt up true metal at your peril, poets,
Sweet moralists, monopolists of God.
But who was England? Byron driven out,
And courts of chancery vile but sacrosanct,
Despoiling Shelley of his children; Southey,
The turn-coat panegyrist of King George,
An old, mad, blind, despised, dead king at last;
A realm of rotten boroughs massed to stop
The progress of democracy and chanting

To God Almighty hymns for Waterloo,
Which did not stop democracy, as they hoped.
For England of to-day is freer--why?
The revolution and the Emperor!
They quench the revolution, send Napoleon
To St. Helena--but the ashes soar
Grown finer, grown invisible at last.
And all the time a wind is blowing ashes,
And sifting them upon the spotless linen
Of kings and dukes in England till at last
They find themselves mistaken for the people.
Drink to me, clasp my hand, embrace me--_tiens_!
The Emperor is home again in France,
And Europe for democracy is thrilling.
Now don't you see the Emperor was sick,
The shadows falling slant across his mind
To write to such an England: "My career
Is ended and I come to sit me down
Before the fireside of the British people,
And claim protection from your Royal Highness"--
This to the regent--"as a generous foe
Most constant and most powerful"--I weep.
They tricked him Gourgaud. Once upon the ship,
He thinks he's bound for England, and why not?
They dine him, treat him like an Emperor.
And then they tack and sail to St. Helena,
Give him a cow shed for a residence.
Depute that thing Sir Hudson Lowe to watch him,
Spy on his torture, intercept his letters,
Step on his broken wings, and mock the film
Descending on those eyes of failing fire. ...

One day the packet brought to him a book
Inscribed by Hobhouse, "To the Emperor."
Lowe kept the book but when the Emperor learned
Lowe kept the book, because 'twas so inscribed,
The Emperor said--I stood near by--"Who gave you
The right to slur my title? In a few years
Yourself, Lord Castlereagh, the duke himself
Will be beneath oblivion's dust, remembered
For your indignities to me, that's all.
England expended millions on her libels
To poison Europe's mind and make my purpose
Obscure or bloody--how have they availed?
You have me here upon this scarp of rock,
But truth will pierce the clouds, 'tis like the sun
And like the sun it cannot be destroyed.
Your Wellingtons and Metternichs may dam
The liberal stream, but only to make stronger

The torrent when it breaks. "Is it not true?
That's why I weep and laugh to-day, my friend
And trust God as I have not trusted yet.
And then the Emperor said: "What have I claimed?
A portion of the royal blood of Europe?
A crown for blood's sake? No, my royal blood
Is dated from the field of Montenotte,
And from my mother there in Corsica,
And from the revolution. I'm a man
Who made himself because the people made me.
You understand as little as she did
When I had brought her back from Austria,
And riding through the streets of Paris pointed
Up to the window of the little room
Where I had lodged when I came from Brienne,
A poor boy with my way to make--as poor
As Andrew Jackson in America,
No more a despot than he is a despot.
Your England understands. I was a menace
Not as a despot, but as head and front,
Eyes, brain and leader of democracy,
Which like the messenger of God was marking
The doors of kings for slaughter. England lies.
Your England understands I had to hold
By rule compact a people drunk with rapture,
And torn by counter forces, had to fight
The royalists of Europe who beheld
Their peoples feverish from the great infection,
Who hoped to stamp the plague in France and stop
Its spread to them. Your England understands.
Save Castlereagh and Wellington and Southey.
But look you, sir, my roads, canals and harbors,
My schools, finance, my code, the manufactures
Arts, sciences I builded, democratic
Triumphs which I won will live for ages--
These are my witnesses, will testify
Forever what I was and meant to do.
The ideas which I brought to power will stifle
All royalty, all feudalism--look
They live in England, they illuminate
America, they will be faith, religion
For every people--these I kindled, carried
Their flaming torch through Europe as the chief
Torch bearer, soldier, representative."

You were not there, Gourgaud--but wait a minute,
I choke with tears and laughter. Listen now:
Sir Hudson Lowe looked at the Emperor
Contemptuous but not the less bewitched.

And when the Emperor finished, out he drawled
"You make me smile." Why that is memorable:
It should be carved upon Sir Hudson's stone.
He was a prophet, founder of the sect
Of smilers and of laughers through the world,
Smilers and laughers that the Emperor
Told every whit the truth. Look you at Europe,
What were it in this day except for France,
Napoleon's France, the revolution's France?
What will it be as time goes on but peoples
Made free through France?

I take the good and ill,
Think over how he lounged, lay late in bed,
Spent long hours in the bath, counted the hours,
Pale, broken, wracked with pain, insulted, watched,
His child torn from him, Josephine and wife
Silent or separate, waiting long for death,
Looking with filmed eyes upon his wings
Broken, upon the rocks stretched out to gain
A little sun, and crying to the sea
With broken voice--I weep when I remember
Such things which you and I from day to day
Beheld, nor could not mitigate. But then
There is that night of thunder, and the dawning
And all that day of storm and toward the evening
He says: "Deploy the eagles!" "Onward!" Well,
I leave the room and say to Steward there:
"The Emperor is dead." That very moment
A crash of thunder deafened us. You see
A great age boomed in thunder its renewal--
Drink to me, clasp my hand, embrace me, friend.

WHY THE BANANAS BELONG TO THE MONKEY

The Project Gutenberg eBook, *Fairy Tales from Brazil,* by Elsie Spicer Eells

Perhaps you do not know it, but the monkeys think that all the bananas belong to them. When Brazilian children eat bananas they say, "I am a monkey." I once knew a little boy in Brazil who was very, very fond of bananas. He always said, "I am _very much_ of a monkey." If you are fond of bananas the Brazilian children would tell you that you are a monkey, too. This is the story they tell to show us how it all came about.

Once upon a time when the world had just been made and there was only one kind of banana, but very many kinds of monkeys, there was a little old woman who had a big garden full of banana trees. It was very difficult for the old woman to gather the bananas herself, so she made a bargain with the largest monkey. She told him that if he would gather the bunches of bananas for her she would give him half of them. The monkey gathered the bananas. When he took his half he gave the little old woman the bananas which grow at the bottom of the bunch and are small and wrinkled. The nice big fat ones he kept for himself and carried them home to let them ripen in the dark.

The little old woman was very angry. She lay awake all night trying to think of some way by which she could get even with the monkey. At last she thought of a trick.

The next morning she made an image of wax which looked just like a little black boy. Then she placed a large flat basket on the top of the image's head and in the basket she placed the best ripe bananas she could find. They certainly looked very tempting.

After a little while the biggest monkey passed that way. He saw the image of wax and thought that it was a boy peddling bananas. He had often pushed over boy banana peddlers, upset their baskets and then had run away with the bananas. This morning he was feeling very good-natured so he thought that he would first try asking politely for the bananas.

"O, peddler boy, peddler boy," he said to him, "please give me a banana." The image of wax answered never a word.

Again the monkey said, this time in a little louder voice, "O, peddler boy, peddler boy, please give me a banana, just one little, ripe little, sweet little banana." The image of wax answered never a word.

Then the monkey called out in his loudest voice, "O, peddler boy, peddler boy, if you don't give me a banana I'll give you such a push that it will upset all of your bananas." The image of wax was silent.

The monkey ran toward the image of wax and struck it hard with his hand. His hand remained firmly embedded in the wax.

"O, peddler boy, peddler boy, let go my hand," the monkey called out. "Let go my hand and give me a banana or else I'll give you a hard, hard blow with my other hand." The image of wax did not let go.

The monkey gave the image a hard, hard blow with his other hand. The other hand remained firmly embedded in the wax.

Then the monkey called out, "O, peddler boy, peddler boy, let go my

two hands. Let go my two hands and give me a banana or else I will give you a kick with my foot." The image of wax did not let go.

The monkey gave the image a kick with his foot and his foot remained stuck fast in the wax.

"O, peddler boy, peddler boy," the monkey cried, "let go my foot. Let go my two hands and my foot and give me a banana or else I'll give you a kick with my other foot." The image of wax did not let go.

Then the monkey who was now very angry, gave the image of wax a kick with his foot and his foot remained stuck fast in the wax.

The monkey shouted, "O, peddler boy, peddler boy, let go my foot. Let go my two feet and my two hands and give me a banana or else I'll give you a push with my body." The image of wax did not let go.

The monkey gave the image of wax a push with his body. His body remained caught fast in the wax.

"O, peddler boy, peddler boy," the monkey shouted, "let go my body! Let go my body and my two feet and my two hands or I'll call all the other monkeys to help me!" The image of wax did not let go.

Then the monkey made such an uproar with his cries and shouts that very soon monkeys came running from all directions. There were big monkeys and little monkeys and middle-sized monkeys. A whole army of monkeys had come to the aid of the biggest monkey.

It was the very littlest monkey who thought of a plan to help the biggest monkey out of his plight. The monkeys were to climb up into the biggest tree and pile themselves one on top of another until they made a pyramid of monkeys. The monkey with the very loudest voice of all was to be on top and he was to shout his very loudest to the sun and ask the sun to come and help the biggest monkey out of his dreadful difficulty.

This is what all the big-sized, little-sized, middle-sized monkeys did. The monkey with the loudest voice on top of the pyramid made the sun hear. The sun came at once.

The sun poured his hottest rays down upon the wax. After a while the wax began to melt. The monkey was at last able to pull out one of his hands. The sun poured down more of his hottest rays and soon the monkey was able to pull out his two hands. Then he could pull out one foot, then another, and in a little while his body, too. At last he was free.

When the little old woman saw what had happened she was very much

discouraged about raising bananas. She decided to move to another part of the world where she raised cabbages instead of bananas. The monkeys were left in possession of the big garden full of banana trees. From that day to this the monkeys have thought that they own all the bananas.

BREAD IN EASTERN LANDS.

The Project Gutenberg EBook of *The History of Bread From Pre-historic to Modern Times,* by John Ashton

Agriculture has always taken a prominent part in Chinese polity, and is incorporated in their religious observances; and a deep veneration for it is inscribed on all the institutions in China. Among the several grades of society the cultivators of mind rank first, then those of land, third come the manufacturers, and lastly the merchants. Homage to agriculture is done annually by the Emperor, who makes a show of performing its operations.

This ceremony, which originated more than 2000 years ago, had been discontinued by degenerate princes, but was revived by Yong-tching, the third of the Mantchoo dynasty. This anniversary takes place on the 24th day of the second moon, coinciding with our month of February. The monarch prepares himself for it by fasting three days; he then repairs to the appointed spot with three princes, nine presidents of the high tribunals, forty old and forty young husbandmen. Having performed a preliminary sacrifice of the fruits of the earth to Shang-ti, the supreme deity, he takes in his hand the plough, and makes a furrow of some length, in which he is followed by the princes and other grandees. A similar course is observed in sowing the field, and the operations are completed by the husbandmen.

An annual festival in honour of Agriculture is also celebrated in the capital of each province. The governor marches forth, crowned with flowers, and accompanied by a numerous train, bearing flags adorned with agricultural emblems and portraits of eminent husbandmen, while the streets are decorated with lanterns and triumphal arches.

Although rice is the staple grain in use in China, wheat-growing is one of the principal industries in the northern and middle parts of that country. The winter wheat is planted at about the same time that wheat is planted here. The soil, especially in the northern provinces, is so well worn that it is unfitted for wheat-growing, and the Chinese farmers, appreciating this fact, and the fact that all kinds of fertilisers are excessively dear, make the least money do the most good

by mixing the seed with finely-prepared manure.

A man with a basket swung upon his shoulders follows the plough, and plants the mixture in large handsful in the furrows, so that when the crop grows up it looks like young celery. Immediately after the first melting of snow, and when the ground has become sufficiently hardened by frost, these wheat-fields are turned into pastures, under the theory that, by a timely clipping of the tops of these plants, the crops will grow up with additional strength in the spring.

Wheat-threshing is the principal interest in Chinese farming. Owing to the scarcity of fuel, the wheat is usually pulled up by the root, bundled in sheaves, and carted to the _mien-chong_, a smooth and hardened space of ground near the home of the farmer. The top of the sheaves is then clipped off by a hand machine. The wheat is then left in the _mien-chong_ to dry, whilst the headless sheaves are piled in a heap for fuel or thatching. When the wheat is thoroughly dry it is beaten under a great stone roller pulled by horses, while the places thus rolled are constantly tossed over with pitchforks. The stalks left untouched by the roller are threshed with flails by women and boys. The beaten stalks and straws are then taken out by an ingenious arrangement of pitchforks, and the chaff is removed by a systematic tossing of the grain into the air until the wind blows every particle of chaff or dust out of the wheat. Even the chaff is carefully swept up and stowed away for fuel or other useful purposes, such as stuffing mattresses or pillows. After the wheat is allowed to dry for a few hours in the burning sun, it is stowed away in airy bamboo bins.

The milling process is a very ancient one. Two large round bluestone wheels, with grooves neatly cut in the faces on one side, and in the centre of the lower wheel a solid wooden plug is used. The process of making flour out of wheat by this machinery is called _mob-mien_. Usually a horse or mule is employed; the poor, having no animals, grind the grain themselves.

Three distinct qualities of flour are thus produced. The _shon-mien_, or A grade, is the first siftings; the _nee-mien_, or second grade, is the grindings of the rough leavings from the first siftings, which is of a darker and redder colour than the first grade; and _mod_ is the finely-ground last siftings of all grades. When bread is made from this grade it resembles rough gingerbread. This is usually the food of the poorest families. The bread of the Chinese is usually fermented, and then steamed. Only a very small quantity is baked in ovens. But the staple articles of food in Northern China are wheat, millet, and sweet potatoes. Wheat and rice are the food of the rich, while the middle classes of the Empire eat millet and rice. In the southern provinces the entire bread-stuff is rice.

[Illustration: CHINESE METHOD OF HUSKING GRAIN.]

At King-Kiang wheat is served as rice. It is first threshed with flails made of bamboo, and then pounded by a rough stone hammer, working in a mortar which rests on a pivot, and is operated like a treadle by the human foot. This separates the husks, and it is then winnowed, the grain being afterwards ground in the usual way.

Rice is undoubtedly the staple food of those parts of China where it will grow, in spite of its being a precarious crop, the failure of which means famine. A drought in its early stages withers it, and an inundation, when nearly ripe, is equally destructive; whilst the birds and locusts, which are fearfully numerous in China, infest it more than any other grain. Rice requires not only intense heat, but moisture so abundant that the field in which it grows must be repeatedly laid under water. These requisites exist only in the districts south of the Yang-tse Kiang (the Yellow River) and its several tributaries. Here a vast extent of land is perfectly fitted for this valuable crop. Confined by powerful dykes, these rivers do not generally, like the Nile, overflow and cover the country; but by means of canals their waters are so widely distributed that almost every farmer, when he pleases, can inundate his field. This supplies not only moisture, but a fertilising mud or slime, washed down from the distant mountains. The cultivator thus dispenses with manure, of which he labours under a great scarcity, and considers it enough if the grain be steeped in liquid manure.

The Chinese always transplant their rice. A small space is enclosed, and very thickly sown, after which a thin sheet of water is led or pumped over it; in the course of a few days the shoots appear, and when they have attained the height of six or seven inches the tops are cut off, and the roots transplanted to a field prepared for the purpose, when they are set in rows about six inches from each other. The whole surface is again supplied with moisture, which continues to cover the plants till they approach maturity, when the ground is allowed to become dry.

The first harvest is reaped in the end of May or beginning of June, the grain being cut with a small sickle, and carried off the field in frames suspended from bamboo poles placed across a man’s shoulders. Barrow (p. 565) thus describes one: ‘The machine usually employed for clearing rice from the husk, in the large way, is exactly the same as that now used in Egypt for the same purpose, only that the latter is put in motion by oxen and the former commonly by water. This machine consists of a long horizontal axis of wood, with cogs, or projecting pieces of wood or iron, fixed upon it at certain intervals, and it is turned by a water-wheel. At right angles to this axis are fixed as many horizontal levers as there are circular rows of cogs; these levers act on pivots that are fastened into a low brick wall, but parallel to the axis and at the distance of about two feet from it. At the further

extremity of each lever, and perpendicular to it, is fixed a hollow pestle, directly over a large mortar of stone or iron sunk into the ground; the other extremity extending beyond the wall, being pressed upon by the cogs of the axis in its rotation, elevates the pestle, which by its own gravity falls into the mortar. An axis of this kind sometimes gives motion to 15 or 20 levers.'

Meantime the stubble is burnt on the land, over which the ashes are spread as its only manure; a second crop is immediately sown, and reaped about the end of October, when the straw is left to putrify on the ground, which is allowed to rest till the commencement of the ensuing spring.

As the cereal food of the Chinese is principally boiled rice, it stands to reason that bakers are not numerous, bread only appearing at the tables of high-class mandarins. It is chiefly replaced by fancy biscuits and numberless kinds of pastry, made not only with wheaten flour, but also that of rice—these serve as vehicles for the various jams and fruit _compotes_ for which the Chinese are famous, and which they know so well how to make; in fact, the bakers are more strictly confectioners, and they can be seen any day busy in their shops baking cakes of rice flour and ground almonds of every imaginable shape and varied in quality by spices. Not only so, but these cakes are sold, already baked, in the peripatetic cookeries which go about the streets. Out of wheaten flour they make a kind of vermicelli, which is much esteemed by the Chinese.

Failure of the rice crops, and consequent famine in Japan, have been the means of introducing wheaten flour into this country more rapidly than anything else could have done. Most remarkable is the universal favour that bread and similar floury concoctions are beginning to enjoy in the treaty ports. This article of food has become completely Japanized, and sells in forms unknown to Europeans. _Tsuke-pau_, sold by peripatetic vendors, who push their wares along in a tiny roofed hand-cart, is much liked by the poorer classes. It consists of slices—thick, generous slices—of bread dipped in soy and brown sugar, and then fried or toasted. Each slice has a skewer passed through it, which the buyer returns after demolishing the bread.

Flour is now used in many other ways besides the manufacture of simple bread. There is _Kash-pau_, cake bread, which is sold everywhere. As the name implies, it is a sort of sweet breadstuff made into cakes of various sizes and artistic figures, according to the skill and fancy of the baker. To an European palate this _Kash-pau_ is rather dry and tasteless, but it is very cheap, and for five _sen_ (three-halfpence) a huge paper bagful can be bought. _Kasuteira_, or sponge cake, is not so much sought after as it used to be. Yet some bakeries, such as the _Fugetsu-do_ and _Tsuboya_, excel in producing the lightest and most delicious sponge cake.

Millet, in China, is only used as food by the very poor.

Wheat is not the primary article of food among the natives of India, and hitherto only enough has been produced for home consumption; but of late years much has been grown for export, and being of a particularly hard nature is useful for mixing with the softer kinds. Still, it is used by itself, and is made into unleavened cakes called _Chupatees_. These are made by mixing flour and water together, with a little salt, into a paste or dough, kneading it well; sometimes _ghee_ (clarified butter) is added. They may also be made with milk instead of water. They are flattened into thin cakes with the hand, smeared with a small quantity of _ghee_, and baked on an iron pan, or sheet of iron, over the fire.

Historic, too, is the _Chupatee_, for by its means the message was sent round throughout the length and breadth of British India for the rising against the English rule—known as the Indian Mutiny. Its true meaning was not at first understood, as we may read in the Indian correspondence of the _Times_, dated Bombay, March 3, 1857: 'From Cawnpore to Allahabad, and onwards towards the great cities of the North-West, the _chokedars_, or policemen, have been of late spreading from village to village—at whose command, or for what object, they themselves, it is said, are ignorant—little plain cakes of wheaten flour. The number of cakes, and the mode of their transmission, is uniform. _Chokedar_ of village A enters village B, and, addressing its _chokedar_, commits to his charge two cakes, with directions to have other two similar to them prepared; and, leaving the old in his own village, to hie with the new to village C, and so on. English authorities of the districts through which these edibles passed looked at, handled, and probably tasted them; and finding them, upon the evidence of all their senses, harmless, reported accordingly to the Government. And it appears, I think, with tolerable clearness, that the mysterious mission is not of political but of superstitious origin; and is directed simply to the warding off of diseases, such as the choleraic visitation of twelve months ago, in which point of view it is noteworthy and characteristic, and not unworthy to be remembered together with last year's grim and picturesque legend of the horseman, who rode down to the river at dead of night and was ferried across, announcing that the pestilence was in his train.'

Apropos of Indian flour, Col. Meadows Taylor, in _The Story of My Life_, tells a story anent the adulteration of flour in India.

'During that day my tent was beset by hundreds of pilgrims and travellers, crying loudly for justice against the flour-sellers, who not only gave short weight in flour, but adulterated it so distressingly with sand that the cakes made with it were uneatable, and had to be thrown away. That evening I told some reliable men of my

escort to go quietly into the bazaars and each buy flour at a separate shop, being careful to note whose shop it was.

‘The flour was brought to me. I tested every sample, and found it full of sand as I passed it under my teeth. I then desired that all the persons named in my list should be sent to me with their baskets of flour, their weights and scales. Shortly afterwards they arrived, evidently suspecting nothing, and were placed in a row seated on the grass before my tent.

‘“Now,” said I gravely, “each of you is to weigh out a ser (two pounds) of your flour,” which was done. “Is it for the pilgrims?” asked one.

‘“No,” said I quietly, though I had much difficulty to keep my countenance. “You must eat it yourselves.”

‘They saw that I was in earnest, and offered to pay any fine that I imposed.

‘“Not so,” I returned, “you have made many eat your flour; why should you object to eat it yourselves?”

‘They were horribly frightened, and, amid the jeers and screams of laughter of the bystanders, some of them actually began to eat, spluttering out the half-moistened flour, which could be heard crunching between their teeth. At last some of them flung themselves on their faces, abjectly beseeching pardon.

‘“Swear!” I cried, “swear by the Holy Mother in yonder temple that you will not fill the mouths of her worshippers with dirt! You have brought this on yourselves, and there is not a man in all the country who will not laugh at the _bunnais_ (flour-sellers) who could not eat their own flour because it broke their teeth.”

‘So this episode terminated, and I heard no more complaints of bad flour.’

The Indian flour mill is very primitive, consisting of two great mill-stones, of which the lower is fast, and the upper is usually turned by two women, who feed the wheat by handfuls into a hole which passes through the stone. The meal so obtained is simply mixed with palm yeast, and baked in very hot ovens, which have been heated for several days. The small European householder finds it more convenient to patronise the Mohammedan bakers, of whom, however, the bread has to be ordered in advance. Sometimes two or three English families combine, and hire a baker, paying him a monthly salary, and providing him with the raw material.

The yeast mentioned above is made from the sap of the date palm. In

April, before the flowers appear, a Hindoo climbs the naked trunk—for the leaves, as in all palm trees, are borne on the top. The man's feet are bound together by a rope, and about his hips are fastened two pots for the reception of the sap. As he climbs, he calls out, '_Darpor, darpor ata hain_,' which, being interpreted, means, 'The palm-tapper is coming.' This is for the benefit of the Mohammedan women who might be sitting unveiled in the courtyards of the houses exposed to the view of the climber after he has risen above the tops of the walls. A tapper who once fails to give this warning cry is thenceforth forbidden to ply his trade. When the tapper has reached the crown of the tree he cuts two gashes in opposite sides of the trunk with an axe, which he has carried up in his mouth. Then he fastens the pots under the gashes and descends. The full pots are taken away and empty ones put in their place twice daily. The sap has a sweet taste, and contains some alcohol even when fresh. After standing in the sun in great earthen pots for a few days it begins to ferment, after which it deposits a thick white substance. This, taken at the proper time, is used as yeast.

But rice is, in India, the staff of life, being used to a greater extent than any grain in Europe. It is, in fact, the food of the highest and the lowest, the principal harvest of every climate. Its production, generally speaking, is only limited by the means of irrigation, which is essential to its growth. The ground is prepared in March and April; the seed is sown in May and reaped in August. If circumstances are favourable there are other harvests, one between July and November, another between January and April. These also sometimes consist of rice, but more commonly of other grain or pulse. In some parts millet is used as food. Many are the ways of cooking rice—there are powder of cucumber seeds and rice, lime juice and rice, orange juice and rice, jack fruit and rice, rice and milk, and sweet cakes made of rice flour, with or without green ginger.

The Bombay baker is a man of a different stamp altogether to the Bengal baker. He is invariably a Goanese and a native Christian, and adopts his profession not from choice but by heredity. For generations past his fathers have been bakers, and have, in accordance with the rules of the Society of Bakers, to which they must have belonged, studied some portion at least of the art of manufacturing bread. The Bombay baker is, moreover, a man of substance. To begin with, he grows his own wheat, and has it conveyed to his factories, where as many as 200 hands are employed in converting it into raw material for cooking. He retains a staff of _chefs_, who also hail from Goa, and who attend exclusively to the baking. Greater comparative intelligence and a love for his trade enable him to turn out a far superior article to that of his ignorant contemporary in Upper India; but even in Bombay the same fault has to be found with the manufacturer: either the bread is too fine, or it is too 'brown'—that is, it contains too much bran.

THE PHANTOM BRIDE

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THERE were three of us: men between youth and middle age who had gone through school and college together, had walked the hospitals and worked in the dissecting room without a break in our friendship; and, separated by the exigencies of our practice, had still, as though by some occult sympathy, kept in touch with each other across long stretches of absence and silence. We were sitting with our coffee and cigarettes on the public walk above Florence. Before us lay the great square with the colossal David: the bronze giant that looks ever to the hills beyond the town, with his sling ready to defend her from assault; while behind us rose the church from which the creator of that giant really had protected the city against the strange-speaking North-men who had poured over those very hills for her destruction. The last gleam of sunshine was, as we knew, making the gold of the mosaic glitter over the church-door there above us. It lay too on the town at our feet, lighting up the captivating grace of the bell-tower, the chastened glow of whose marbles seemed actually before our eyes; bringing out the unsurpassable curves of the cathedral dome, and the squatter lines of that of St. Lorenzo, where the Medici moulder in their marble tombs; lingering on the graceful sturdiness of the Palazzo Vecchio; touching the spires of the church of St. Croce and of the Bargello where prisoners once pined. It was that hour before the actual sunset when the city, lying languidly amid the encircling hills, seems consciously to breathe out the suavity by which she captures her lovers and holds them to her in life-long thraldom. And two of us had been long away from our mistress; the spirit of the time and the place was upon us; confidences of loves and sorrows rose naturally to our lips.

Conti flung away his cigarette and threw himself back in his chair. I glanced at his small nervous hands as he folded his arms; remembering their quick, sure movements in the most delicate operations; and then I looked into his blue eyes, whose bright sparkle the deadly habit of morphine-taking, the future ruin of that bright career, was already changing into dreaminess.

“Decidedly, Neri,” exclaimed he, “you are the most changed of the three. There you sit smoking your cigarette as quietly as though we came here every day of our lives. With a line between your brows, too! You look as though you were obliged to take a wife to-morrow. What has happened? Has someone got drowned in such a way that you cannot tell whether it was a homicide or a suicide, and are afraid of misleading justice? Has a supposed corpse come to life again and objected to being dissected?”

A smile flickered across Neri's gravity. He was the handsomest of the three: one of the best made men in the town. He wore a thick, pointed beard, and the mouth under the moustache was of quite exceptional firmness and delicacy. In fact he was what the women call a _bell'uomo_; and but for his thorough-going solidity of character and immense variety of interests, would infallibly have had his head turned by their admiration. As it was he simply had no time to give them very much attention. And lately, so we were told, he had taken less notice of them than ever; but had gone about his work with the line between his brows, and lips that rarely relaxed except to smile encouragement to some poor patient on whom he had operated.

He breathed out the smoke slowly, luxuriously, from his mouth and nostrils—he was a confirmed cigarette smoker—and answered:—

"No, I am not going to be married to-morrow; and I was thinking of a _post-mortem_, but not of such an one as Conti imagines. I will tell you the story; but keep it to yourselves. There's a woman in the case, of course," he added, with a short nervous laugh. Then he hesitated again, and at last began.

"Just a year ago to-day I had to make a _post-mortem_, and a report to the police, on the body of the one woman who has entered profoundly into my life. She was a rising operatic singer with a singular power of vivid dramatic intensity, though I do not think her impersonations were ever a full expression of her innermost powers. Her interests were extremely varied, her mind exceptionally mobile—her occupation fostering this mobility, and increasing that power of quick sympathy, of putting herself into touch with the people with whom she came into contact, which was one of her distinguishing features. She was not beautiful; but she had fine large dark eyes that looked straight at you; and she was so lithe and girl-like in all her movements (she was rather older than myself in reality) that you felt inclined just to take her in your arms and hold her fast against all the troubles of the world—and she had her share, I warrant you."

"H'm," said Conti. "And you did it, I suppose. You seem to have been hard hit."

"No, I did not do it; although I was more than hard hit. Her position was so difficult that I had no heart to make it worse; and she had a certain dignity about her, even in her moments of most childlike _abandon_ in talking with me, that prevented any light advances. You felt as though you must help her even against herself, for her nature was evidently passionate; and that made your feeling for her all the more profound. She had married unfortunately; a man who had ill-treated and neglected her in every possible way. After a couple of years she fled from her husband, left the stage, and changing her name, lived by giving singing lessons; and, when I first knew her, was making a brave

struggle not only to support herself and her boy, but to obtain and hold such a position in the world as should enable her to launch him in his career. Then she fell ill; more from exhaustion of vital force than anything else; and I never saw anything like the spirit with which she bore up. She was almost too weak to teach, and held her pupils together with the greatest difficulty; yet she managed always to wear a bright smile, and she refused absolutely to give up hope. 'Why, it is the most stimulating of medicines,' she would say. 'If I give up that, I shall collapse immediately. I consider that, given the conditions in which I live, self-deception, on the right side of course, is a distinct duty.'

"Towards the end of the summer she left town for a fortnight, and I went out to see her. She insisted on our having a little picnic together, and took me to the top of a hill hard by. There was a small pine wood up there, with a stretch of grass and ling. Opposite rose Castel di Poggio. The hills were round us ridge on ridge, and fold on fold; their bosoms veiled by draperies of mist, for it was still early. We might have been hundreds of miles away from any town: yet Florence was close at our feet. I had left it only a couple of hours ago, and should be down there again breathing the phenic acid of the hospital that same afternoon. Never shall I forget the morning of chat and reading (I had taken up a volume of poems—her gift), with the bees booming in the ling, the gorgeous green of the pine needles, intense unchangeable, against the brilliant sky, and the mingled scents of pine, cypress, honey-flowers, and aromatic herbs. As we were starting to go down she stopped. 'We must keep vivid the remembrance of this, Neri,' she said, and caught my hand. I turned and looked into her eyes, whose deep earnest gaze remains with me yet. We clasped hands, and so parted.

"Well, when she came back to Florence she began to lose her spirit. Money matters worried her, I fancy, though she would never trouble me with them. Then her husband accidentally found and began to trouble her, threatening that unless she went back to live with him he would take the boy (now nearly seven years old) from her. She sent the child to her people in Switzerland. 'It would so much simplify matters if I were to die,' she wrote me once. 'My people would never let him go then; and my husband could urge me no longer. The struggle is too great. Only I do not want you to have to make the _post mortem_ on me when I have said good-bye to this life: it would be too painful for you.' Still I did not think she would ever really commit suicide; not because she had any fear of death, but because I knew she looked on the proceeding as cowardly; and also because she had a power of the most intense enjoyment and interest in all the beauties of life, whether physical or intellectual. Hers was the most elastic nature I have known. I said what one could say, and it's precious little, in such circumstances: and she seemed to recover tone.

"Then I left Florence for nearly a month. I was obliged to return

unexpectedly to the hospital; and was just leaving it to call upon her when I was told there was a _post-mortem_ waiting for me. I went into the room. It was she; lying there on the table....

“Well, I got through somehow. It did not take very long, for I knew her well enough to guess what she had used, and had only to verify a suspicion. And while I was working it seemed as though she were looking at me, looking at me with a pitifully pleading look as though supplicating forgiveness for the horror of my position. I remember I kept her covered as religiously as though she had been alive; and I remember I arranged everything when all was over and carried her in my own arms to the bier which was to take her away. Then, I believe, Paoletti found me, got me into a cab, and drove me home in a high fever. The second evening I came to myself. I was without fever and fell quietly asleep. Towards morning I awoke. She was there standing by my bed with the same pitifully pleading expression I had felt in the hospital. She caressed my cheek, then bent over me and touched my lips.

“Oh yes, I know. _Optical hallucination_, _subjective sensation_, and all the rest of it. _Hallucination_; _subjective_ as much as you like; but I saw her; and I feel her about me now just as plainly as I felt her then. I suppose the impression will fade as time goes on. I may take a wife and have children as other men do. Still (with a repetition of the little nervous laugh) it has not begun to fade yet; and I feel as though I should see her once more: on my death bed.”

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“Decidedly,” said Conti, breaking the silence. “Nature’s irony is more scathing than man’s. It is just Neri,—- Neri who never philandered, who never sentimentalised, who would have nothing to do with what was not downright brutally real—it is just Neri whom the Fates have wedded to a phantom bride.”

“Come,” said Neri, shaking himself, “it’s nearly dark; we can see neither dome nor bell-tower any longer. Shall we go to the Arena? Tina di Lorenzo is acting. And then we will finish up at the Gambrinus Halle.”